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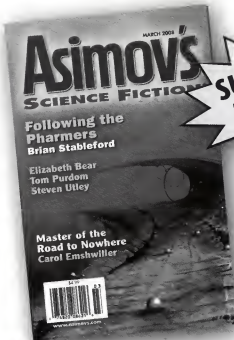
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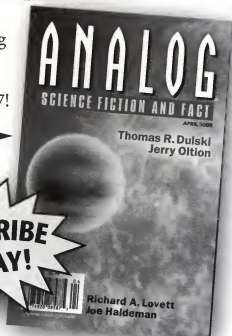
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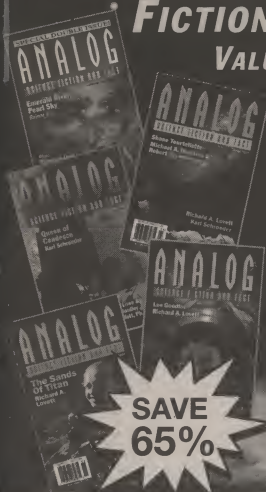
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# Asimov's

## SCIENCE FICTION

SEPTEMBER 2008

Vol. 32 No. 9 (Whole Number 392)

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Cover Art for "The Ice War" by John Picacio

### NOVELETTES

- 12 IN THE AGE OF THE QUIET SUN ..... WILLIAM BARTON  
82 MIDNIGHT BLUE ..... WILL MCINTOSH  
106 THE ICE WAR ..... STEPHEN BAXTER

### SHORT STORIES

- 44 SOLDIER OF THE SINGULARITY ..... ROBERT R. CHASE  
52 HORSE RACING ..... MARY ROSENBLUM  
64 CUT LOOSE THE BONDS OF FLESH AND BONE . . . IAN CREASEY  
76 SLUG HELL ..... STEVEN UTLEY  
98 USURPERS ..... DEREK ZUMSTEG

### POETRY

- 50 PERSPECTIVE ..... G.O. CLARK  
74 THE GHOSTS OF CHRONOPOLIS ..... BRUCE BOSTON  
96 SCREAMS ..... IAN WATSON

### DEPARTMENTS

- 4 EDITORIAL: 2008 READERS' AWARDS ..... SHEILA WILLIAMS  
8 REFLECTIONS: ANOTHER THIRTIETH  
ANNIVERSARY ..... ROBERT SILVERBERG  
136 ON BOOKS ..... PAUL DI FILIPPO  
142 THE SF CONVENTIONAL CALENDAR ..... ERWIN S. STRAUSS

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## 2008 READERS' AWARDS

This year's Readers' Award celebration was held in Austin, Texas, in conjunction with the Science Fiction and Fantasy Writers of America's annual Nebula awards banquet. The Readers' Awards were distributed at a breakfast party at Ancho's, a restaurant in the Omni Hotel. Unfortunately, none of our winners were in attendance, but we did entertain an exceptional crew of accepters and guests. Although our readers could only be there in spirit, you were well represented by the warm comments I received on so many ballots. Once again, readers mentioned how difficult it was to choose three stories from among the many deserving tales in each category. While we only ran one serial, it was clear, too, that, if possible, many of you would have given Allen M. Steele an award for for his novel, *Galaxy Blues*. Subscriber Jeffrey David Powell summed up these thoughts when he wrote, "Thanks for another great year of *Asimov's*. Willis's Christmas novella, Allen Steele's novel serialization, and the reprinting of Isaac Asimov's "Nightfall" were all high points. Once again, there was such an abundance of great stories, that I wish I could have voted for so many more."

The award for best poem went to Bruce Boston. Bruce asked fellow poet and Nebula-award winning fiction author, Mary Turzillo to accept his award for him. Donato Giancola's July 2007 cover was the recipient of the award for best cover.

Although the painting was from Donato's private collection, I knew it was a perfect match for Nancy Kress's "Fountain of Age" the moment I saw it. Nancy attended our breakfast, and was a very good sport about coming in second in two categories. At the banquet that night, she would have more excitement to look forward to because both of these stories were also nominated for the Nebula award. Nancy accepted the short story award for Elizabeth Bear. "Tideline" (June 2007), which won with an impressive lead over the other stories in its category, was the author's first tale for our magazine. It and two other stories from *Asimov's*—Mike Resnick's "Distant Replay" and Michael Swanwick's "A Small Room in Koboldtown"—are also nominated for this year's Hugo award for best short story. The latter two stories both appeared in our April/May 2007 Thirtieth Anniversary Issue.

"Dark Integers," Greg Egan's novelette from our October/November 2007 issue, took its category with a commanding lead as well. Greg's award was accepted for him by Hugo- and Nebula-award-winning author Geoffrey A. Landis. "Dark Integers" is also on this year's Hugo-award ballot.

Kristine Kathryn Rusch won the Readers' Award for her novella, "Recovering Apollo 8" (February 2007). In a speech that was read by Connie Willis, Kris said that she especially wanted to thank the readers—

# Asimov's

## SCIENCE FICTION

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Left to right: Connie Willis, Mary A. Turzillo, Sheila Williams, Geoffrey A. Landis, Nancy Kress

"They've debated this story and they've let me know how they've loved this story. I appreciate it all." This was our closest fiction category, because readers who thoroughly enjoyed "Recovering Apollo 8" also liked Nancy Kress's novella, "Fountain of Age." In addition, both Kris and Nancy's novellas, along with Connie Willis's "All Seated on the Ground" (December 2007), are currently finalists for the Hugo award.

Other guests at our joint celebration with *Analog Science Fiction and Fact* included *Asimov's* stalwart Jack Skillingstead, and AnLab winners Michael F. Flynn, Richard A. Lovett, and Barry B. Longyear. Paparazzi and press included Liza Groen Trombi from *Locus*, Scott Edelman from *SF Weekly*, Margie Flynn, and Jean Longyear. *Analog's* editor, Stanley Schmidt, and managing editor, Trevor Quachri, co-hosted the breakfast with me.

I had one of the best seats in the house at the Nebula awards that

evening. Seated to my right was Karen Joy Fowler. Karen won the short story Nebula for "Always," another story from our all-star Thirtieth Anniversary Issue. Nancy, seated to my left, picked up the best novella Nebula for "Fountain of Age."

In addition to our Readers' Award winners and finalists, and the list of this year's Nebulas winners, which can be found on page 11, this issue includes one more award winner. When I told Steven Utley that I needed new information for the biographical note that would accompany his story, "Slug Hell," Steven asked for permission to hold a blurb-writing contest on the *Asimov's* Forum. Knowing how quickly discussions on the internet can go astray, I reserved absolute veto power. Fortunately, we struck gold with Forum regular Byron Bailey's entry. Byron's blurb appears on page 76. ○

# **2008 READERS' AWARD WINNERS**

## **BEST NOVELLA**

1. **RECOVERING APOLLO 8;**  
**KRISTINE KATHRYN RUSCH**
2. Fountain of Age; Nancy Kress
3. All Seated on the Ground; Connie Willis
4. Dead Money; Lucius Shepard
5. Alien Archaeology; Neal Asher

## **BEST NOVELETTE**

1. **DARK INTEGERS;**  
**GREG EGAN**
2. Safeguard; Nancy Kress
3. The Prophet of Flores; Ted Kosmatka
4. Trunk and Disorderly; Charles Stross
5. The Mists of Time; Tom Purdom

## **BEST SHORT STORY**

1. **TIDELINE;**  
**ELIZABETH BEAR**
2. How Music Begins; James Van Pelt
3. Distant Replay; Mike Resnick
4. Strangers on a Bus; Jack Skillingstead
5. The Rules; Nancy Kress

## **BEST POEM**

1. **THE DIMENSIONAL RUSH OF RELATIVE PRIMES;**  
**BRUCE BOSTON**
2. The Wings of Icarus; John Morressy
3. Rainstorm; Debbie Ouellet
3. Cendrillon at Sunrise; Jo Walton
5. Classics of Fantasy: "A Christmas Carol"; Jack O'Brien

## **BEST COVER**

1. **JULY;**  
**DONATO GIANCOLA**
2. January; Michael Whelan
3. June; John Allemand
4. September; Dan O'Driscoll
5. December; Michael Carroll

## ANOTHER THIRTIETH ANNIVERSARY

Just over a year ago I devoted this column to a celebration of this magazine's thirtieth anniversary. And the other day I discovered that I have a different thirtieth anniversary to celebrate this year—that of this very column.

No, "Reflections" hasn't been running in *Asimov's* all that time. The opinions and reflections of a very distinguished predecessor occupied this space from the magazine's first issue, which was dated Spring 1977, until its 189th, date August, 1992—none other than Isaac Asimov himself. Isaac died in April of 1992, and in the issue dated September 1992, editor Gardner Dozois wrote a brief editorial piece to announce the sad news.

But Gardner, swamped with manuscripts to read for a monthly magazine, preferred not to have to write a monthly editorial column as well. And so for the next couple of years no such columns appeared here, except for the very occasional guest editorial, until I took over Isaac's old slot as columnist with the July 1994 issue, the 218th. And here I have been, issue after issue, ever since. (Minus one, around a dozen years ago: at the time I was struggling to finish a novel that was running greatly overdue, and my wife Karen stepped in and wrote one month's essay on my behalf. Not as a ghost-writer, mind you. She got her own byline.) Except for that one I've done them all, month in and month out, for the past fourteen years, well over 150

columns by now. Some demon bibliographer will probably be able to supply the exact number. I can't.

Though I've been an *Asimov's* columnist for the past fourteen years, the column itself had already been in existence for sixteen years when I transferred it to this magazine, and so this year marks its thirtieth anniversary. I provided this account of its history in my initial *Asimov's* column:

"It was just about sixteen years ago—the spring of 1978—that I took upon myself the task of writing a regular column of commentary on the science fiction scene. The magazine that invited me to sound off was called *Galileo*, which was pretty much a shoestring operation, published out of Boston by a bunch of people whose main excuse for publishing it was that they loved SF, and edited by the ambitious and determined Charles C. Ryan.

I suppose you would have to call *Galileo* a semi-pro operation, considering its irregular publishing schedule, its not-quite-ready-for-prime-time format, and its basically subscriptions-only distribution scheme. But so far as its editorial content went it was as professional as any SF magazine of its era—including *Asimov's*, which was all of one year old at the time, and just beginning to hit its stride. Looking through my file of *Galileo*, I see its contents page studded with names such as Connie Willis, Joan D. Vinge, John Kessel, Alan Dean Foster, and Lewis Shiner, all of them in the

early years of careers that soon would shine with high accomplishment. Veterans like Brian Aldiss, Harlan Ellison, Marion Zimmer Bradley, and Jack Williamson had stories in it too; and there were non-fiction pieces by the likes of Carl Sagan, Arthur C. Clarke, Hal Clement, and Frederik Pohl. All in all, it seemed to me a fine place for me to set up shop in as a pontificator.

I very much wanted to do some pontificating, too. After a quarter of a century as a professional science fiction writer, I had wandered into a time of personal and creative crisis that had led me, late in 1974, to retire from writing "forever." A great deal of my motivation for walking away from my career had to do with the changing nature of science-fiction publishing in the United States in the mid-1970s. The exciting revolution of concepts and literary technique that had acquired the label of "The New Wave" had failed in a big way; the ambitious work of the writers who were considered to be part of the New Wave was swiftly going out of print, and what was coming in was the first surge of Star Trek novelizations, Tolkien imitations, juvenile space adventure books, and other highly commercial stuff that I had no interest in writing or reading. I felt crowded out by all the junk; and, having also hit a period of mental burnout after years of high-level productivity, I was too tired to

fight back against the overwhelming trend toward more juvenile SF. So I simply picked up my marbles and walked away, intending my disappearance from the field to be permanent.

When Charlie Ryan approached me about doing a regular column three and a half years later, I was still deep in my irrevocable and permanent retirement, but I had begun to feel as though I were living a weirdly posthumous existence. It was apparent to my friends, if not yet to me, that I was growing increasingly troubled and confused by my extended period of self-imposed silence. Although I had had plenty of offers to write my kind of science fiction on quite generous terms, I wasn't yet ready to get back into the business of writing fiction again; but I wanted to write *something*, if only to re-establish my connection with the field of fiction that had been the center of my imaginative experience since my boyhood. The truth was that I missed science fiction and my role in shaping it. I could no longer bear to be invisible, after so many years at the center of things. So I accepted *Galileo's* invitation to do a regular commentary piece gladly and eagerly, and with some relief.

I wrote six columns for *Galileo* before it vanished with its sixteenth issue, dated January 1980. By then my retirement from fiction had ended—I was working on a

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long novel called *Lord Valentine's Castle* when *Galileo* went under—and I was definitely back in harness with the bit between my teeth. Scarcely had *Galileo* been laid to rest but I had an offer from Elinor Mavor, then the editor of the venerable *Amazing Stories*, to move my column to her magazine. Which indeed I did, beginning with the May 1981 *Amazing*; and there it remained for thirteen years, through a change of publisher, three changes of editor, one change in the column's name (from "Opinion" to "Reflections"), and a total transformation of the magazine's format. Issue after issue, Silverberg spouting off on this topic or that for something like a hundred columns.

Then *Amazing* too went under, and, caught without a podium for my orations and accustomed after sixteen years to holding forth, I quickly accepted Gardner Dozois' invitation in the spring of 1994 to transfer the site of my column to *Asimov's*, and here I still am, hoping that both the magazine and I enjoy enough longevity to allow me to equal Isaac's record for long-term column production.

And what sort of things was I writing about, thirty years ago in those old *Galileo* columns?

In the first one of all I noted that science fiction writers, long a notably underpaid crew, were suddenly getting huge advances from book publishers and many were now able, for the first time, to make their livings as full-time writers, something that only a handful of us had been able to manage when I broke in in the 1950s. "I am not, repeat *not*, in any way objecting to the sudden prosperity that has engulfed nearly all science fiction writers," I said. "But I do feel some

qualms about the ease with which young writers can make themselves self-supporting these days. I know that beyond doubt that I was injured as a writer by having things too easy in my twenties . . . Maybe the best science fiction really is written by part-time writers." Well, time has taken care of that problem. Most new SF writers now get very modest sums indeed for their work, and very few are able to set up shop as full-time pros. Even a lot of veterans are returning to their day jobs. We no longer have to worry, most of us, about the agony of excessive prosperity.

I had more to say on the same subject in the second column. In the third, I talked about the packaging and marketing of SF books as it applied to my own *Lord Valentine's Castle*, which was about to appear. "Of course we're not going to market the book as science fiction," my editor had told me. "We'll handle it as a straight mainstream novel." It was a noble attempt to break me out of the science fiction ghetto, which had been so constricting for us all. But I did point out to him that the novel takes place on a planet umpteen light-years from now and some fifteen thousand years in the future, which made mainstream handling a bit questionable, and in the end they marketed it as science fiction and did reasonably well that way. Today SF remains what they call "category fiction"—that is, ghetto stuff—and the advent of computerized book-selling makes it most improbable that that will ever change.

In the fourth column I noted the death of the New Wave, that school of highly experimental, even avant-garde SF, that had its little era between 1966 and 1972 or there-

abouts. I expressed no regrets for the excesses of the New Wave, but suggested that it had at least succeeded in boosting the general literary level of SF beyond the old pulp standards, and the effects of that would probably be permanent. By and large, I think I was right.

Column five continued to examine the New Wave's rejection of old-fashioned notions of plot in favor of stylistic experimentation, and said, "We stand at the threshold of the 1980s; we have survived a time of revolution; we have, I hope, integrated our divergent excesses into something more harmonious; now let us produce a science fiction that avoids both elitism and subliteracy, fiction that holds readers so that they stand spellbound as we tell our tales, and cannot choose but hear." Did we? I surely hope so.

And in the sixth and last *Galileo* column, in the magazine's final issue, dated November 1979, I grumbled about the spelling errors in some recently published books and cited the legal phrase, *Falsus in uno, falsus in omnibus*—"False in one thing, false in everything." If a writer doesn't know how to spell, can we trust him to know anything else? And if a publisher doesn't bother to correct the writer's spelling errors, how much attention is the publisher paying to other aspects of his book, like inconsistencies of plot? I still feel that it's a writer's job to get everything right, from the spelling of words to the name of the capital of Albania. But here we are, thirty years later, and—well, I don't want to get started on the current state of knowledge of such things as spelling and grammar, let alone geography. If I get myself properly wound up I might spend the next ten columns in one long vast lament. ○

# Asimov's

## SCIENCE FICTION

### SALUTES THE WINNERS OF THE 2008 NEBULA AWARDS

#### BEST NOVEL

*THE YIDDISH POLICEMEN'S UNION*

Michael Chabon

#### BEST NOVELLA

"FOUNTAIN OF AGE"

Nancy Kress

(*Asimov's*, July 2007)

#### BEST NOVELETTE

"The Merchant and the  
Alchemist's Gate"

Ted Chiang

#### BEST SHORT STORY

"Always"

Karen Joy Fowler

(*Asimov's*, April/May 2007)

#### BEST SCRIPT

*Pan's Labyrinth*

#### GRAND MASTER

Michael Moorcock

# IN THE AGE OF THE QUIET SUN

William Barton

For almost forty years, William Barton has written science fiction books and stories, including the award-winning novel *Acts of Conscience* (Warner Aspect, 1997) and several stories for *Asimov's*—most recently, “The Rocket into Planetary Space” (April/May 2007). Regarding his latest tale, the author says, “This story emerged from the last, much as that one did from ‘Harvest Moon’ (September 2005) before it. From a past that never was but could have been, to a future close enough to taste, to . . . what? When does today become tomorrow and that real future slip over to one only imagined? This is one answer. One out of many, perhaps.”

When I was about fifty years old, I read a novel whose narrator began by saying, “I have always loved the stars.” I don’t remember much else about the story, title and author long forgotten, but I do remember the phrase, how it resonated within me, how it began the changes that pushed me out of an old, stale life and into a new one, so unexpected, so terrifyingly wonderful.

I used to read a lot of what was called science fiction in those days, tales of far futures, splendid futures, horrible futures, patently impossible futures, not because there was any hope one of those futures might come true, but because in our stale old world it seemed certain *no* future would come true, good, bad, or indifferent. If you’d asked me, I would not have predicted I would be alive and well almost a half-century later, and if I had, I would have anticipated that same stale old world, grown staler and older still.

And yet, here I sit in the command pilot’s chair of *Anabasis*, a somewhat elderly AndrewsSpace Model A mk. IX staged Z-pinch fusion-initiated nuclear fission drive scoutship, looking out through a live-action

freeze frame window at an infinitely deep black sky aswarm with those same steely bright stars I'd always known I loved.

Numbers and graphs danced like sugarplums in my little horseshoe of displays, while Ylva, the ship's organic AI system whispered sweet nothings in my earbuds, secure in the employ of Standard ARM, who'd stolen that terrifyingly wonderful life from me, took my wealth, killed my best friend, and threw me in prison to rot, while my wife languished in a nursing home and died from old age and penury, just when salvation was at hand.

Mostly, I wanted to forget all that'd happened, get on with my new life and new name. Just live. That's all you have to do. I glanced over the freeze-frames, determined to take my own advice for the ten-thousandth time, and Ylva's sultry voice whispered in my right ear, "Coming up on six hundred kilometers from Hector, Mr. Zed. Are you all right?"

"Fine sweetie. Too much time on my hands. When you're as old as I am . . ."

Voice softening, she said, "I'll never get to be as old as you."

"Sorry."

She said, "When my heart stopped and they harvested my organs, that particular clock stopped ticking for me. Bastards." Official view is, they're just computers with some dead human nervous system tissue added in, but when you hear that bitterness in your ear . . .

I shrugged. "There are worse things than being thirty-nine forever, sweetie."

She laughed in my ear then, familiar, warming those cockles we all hope we have. "The drugs will get better, and you'll get back what you lost."

She knows what I really lost. The rest of it . . . Well, the Maunder Minimum came on schedule, no more sunspots, cooler climate ameliorating that famous global warming, and no more solar magnetic storms, helping bring on the Great Age of Solar System Exploration.

Of course, there was a corresponding increase in the cosmic radiation flux to go along with it, but we can do things about that. Drugs to make your cells tougher and harder to damage. Drugs to encourage your DNA to do a better repair job, when damage does occur. Side effects? Well, yes. That shiny, beady, lizard-like skin. That complete loss of hair, body and pate. Oh, and the "dramatic reduction in primary sexual characteristics," that too.

And one other side effect they liked to call an "undocumented feature," as if the drugs were developed by software engineers. Harder to damage? Better repair at the cellular level? They'd started giving me the drugs while I was in prison and volunteered to be a medical test subject in exchange for being let out while I was still shy of eighty.

That was twenty years ago.

Ylva said, "We got a laser intersect from Mars. Standard HQ want to download our databases."

"A little early, isn't it?"

"A couple of hours."

"They say why?"

"No. They never do."

"Anything else?"

"A pip from Vesta just after the laser started. 'Message for Murph' routed through an OPEL ship crossing Jupiter's orbit." Jenny Murphy, my senior commodities specialist, still had family, three grown children back on Earth, kids she'd had with the husband who died in an accident on Calisto last year, the one who'd bestowed the embarrassing flight-handle Candyfloss on her. Probably letting her know she was a grandma now. Something like that.

You could get private messages through the Outer Planets Exploration Laboratory. Technically, they were a US government organization, but affiliated with MIT and Cal Tech, not quite so beholden to agencies, politicians, and corporate money. Almost, but not quite. Trivial messages. The sort of thing a company would tell you was "a misuse of private resources."

Jenny and her husband had been planning on going home when their contracts were up. Go home, stop taking the drugs, turn back into human beings again. I guess if I stopped taking them, I'd turn into a corpse.

I ran my hand around the freeze-frames, brought up a telescopic image of Hector on the main channel, just below the live-action window. Dark gray, dimly lit up by the tiny sun, largest of the Fore-Trojan Asteroids, paler, soft and rounded on one side, darker and more angular on the other. Good compositional sign, of course, letting us know there might be a discrete tidal warming zone inside the body.

Standard Asteroid Resources Mining had staked a claim to the entire cluster, not long after they killed Willie and threw me in the slammer, not long after they'd taken control of the company, taken over the name we'd so cleverly made up.

Time to make good on the claim. Oil for the engines of Earth? Hard to believe I was the marketing genius who thought that one up, more than forty years ago.

Floating weightless in my sleeping bag, hanging from one wall of my closet-sized stateroom, I could hear Jenny chattering away out loud with Ylva, the two of them giggling like happy young girls. Her version of Ylva, so different from mine, maybe fourteen years old, with bright blue eyes and ripe-wheat hair, pigtails spiraling around each ear, Princess Leia-style. Jenny's forty years younger than I am, Ylva younger still, but I guess they keep revising the saga, keeping it current, keeping it popular.

I'd seen the real Ylva, in an old photo in a file I got using up-to-date hacking skills Standard ARM doesn't know I have.

The photo is from 2038, the year she died, and shows a thin, angular, far-from-pretty woman just shy of forty, arm of a tall, severe-looking man around her shoulders, her own hands on the shoulders of two children standing in front of her, a boy of about twelve, a girl maybe eight, both with that same ripe-wheat hair, rather than the man's dark brown. No one's smiling in the photo, but they all look . . . secure. Yes, that's the right word. In the background, there's a small house and a cheap compressed-air hybrid car, beyond a dry-looking field and a stand of parched timber.

The dim darkness around me flickered and my own little Ylva slid out of the air, looking flat for just a second, then inflating to 3D.

She was a little like the girl Jenny talks to, a little like the woman in the picture too. Fortyish. But fuller, sleeker, prettier, only the ripe-wheat hair just the same. Today, she was dressed in a more or less colorless, form fitting knit outfit, sweater and slacks clinging to her just so, sweater outlining full breasts, slacks clinging suggestively to her crotch.

She dimpled a smile, subtle eyespots able to determine just where I was looking.

I'd racked my drug-addled brain trying to figure out why this version of Ylva looked so familiar to me. Finally, I realized she was mimicking some TV personality from back in the 1990s, though I couldn't remember exactly which one. A girl with a Hispanic name, belied by hanging tresses of this same ripe-wheat hair.

Maybe she was still on TV when Ylva was a girl, not long after the turn of the century. Maybe in reruns? Or maybe the damn computer can read my mind.

She said, "You look sad, Mr. Zed. Are you thinking about Sarah today?"

Ylva knows I loved my wife. Loved her more than there are any words to say. Knows I miss her. Knows I think I killed her, just the same as I think I killed my friend Willie Gilooly, even though the one died in a Social Security Home, died from old age when I did not, and the other died because when the FBI came to our offices, he took out a pistol and ordered them off the premises. Died defending what was right, while I meekly held out my hands for the cuffs and toddled off to Federal prison.

God damn it.

I said, "No, actually I was thinking about you." Giggling from the next compartment. "This you. That you. The real you."

She stretched, arching her back, belly sinking in, breasts pushing out hard against the stretchy knit cloth. "The real me? You old fool."

Behind her, a misty image formed, a bullet train crossing the landscape of 2038 America, running the fast track between Chicago and Kansas City, a two-hour express trip. Inside, that secure woman sat with a child on either side of her, the three of them reading an old coffee-table book together. It was something from the middle of the twentieth century, with Bonestell paintings of outer space, with fantastic illustrations of conical Von Braun rockets, men in Tin Woodman spacesuits here and there.

Voice ever so wistful, my Ylva said, "Orm and Helga both wanted to be astronauts. Wanted to grow up and work for Standard ARM, go to Mars, Venus, Jupiter, maybe explore the moons of Saturn when that day came . . ."

The misty scene behind her showed the dark haired man waiting at an ultramodern train station in KC, waiting among the throngs for his family to join him in the new city, where the new jobs were. New jobs that would send those children to MIT or maybe Cal Tech, get them the degrees necessary to make their own dreams come true.

But the bullet train twirled in the air somehow, sprawling across the landscape at four hundred miles an hour, crushing houses, killing hundreds and . . . Ylva woke in the wreckage, woke in a dreamlike state, no pain, no feeling of any kind, no movement, but for her eyes. About ten feet away was half of her daughter, beyond, a shoe that looked like one of the ones her son had been wearing. It seemed as though there might be a foot still inside.

She closed her eyes and went away.

Woke up inside a machine.

Like a litany, she said, "When I ticked the box on my driver's license renewal form, agreeing to be an organ donor, I thought I'd be giving something to those in need, corneas, kidneys, a heart . . . but the bastards . . . The bastards."

The misty scene faded, and Ylva stood, stretched again, body moving as if under one gee, then pulled the sweater off over her head, quickly slid down the slacks and stood naked, facing me, watching my eyes go here and there.

After a while, she said, "I wish I could climb out of the machinery for you, Mr. Zed. I really do."

And I whispered, "If you could, I wouldn't be much use to you, would I?"

Perhaps we will live forever, Ylva and I.

I guess the joke's on us.

In time, Ylva slid away, past, present, and future forgotten. I eeled from my sleeping bag, snakeskin making a corduroy sound on the slick cloth, slid aside the roller-blind door of my stateroom, and floated out into the main hab compartment.

Jenny was naked in the personal hygiene module, in front of the sink and mirror, toes anchored in foot restraints, having a sponge bath. I've seen pre-space pictures of Jenny Murphy, even the one carried by her husband on the day he died, showing why he'd called her Candyfloss. Now, she had gray lizardskin just like mine, hairless here, hairless there, breasts gone without a trace, between her legs perhaps a little less than what's left between mine.

She looks like a Sleestak.

When I told her that, she'd had to look the word up. Then we'd gotten a few episodes to watch, and had a laugh about the phrase "routine expedition."

She was laughing now, lizardface bright and sunny, "Oh, that's *hysterical*, Ylva!"

The ghostgirl hanging in the air was laughing too, laughing like a happy child.

My Ylva sometimes wonders if there's anything left of her dead children, if they're part of another machine somewhere, some machine she may some day meet. I haven't been able to find a trace, but her husband eventually remarried, a small woman with pretty brown skin and tufty black hair, and they have two beautiful golden children now.

I pushed over to the med module, flying like a character in a dream, put my toes in the restraints, took out a meter and loaded a test strip, made sure there was a cartridge of lancets in the gun. I fired it into my left palm, a little burn for just a moment while I watched that familiar microliter of blood well up. Dipped in the strip and watched it drink. Hmh. Blood sugar a high 133 mg/dl. B12 a little low. An extra high prescription for three different kinds of antirad drugs. I wonder . . .

When I turned and looked at Jenny and Ylva, two distinct blue contrails darted across the room. The images moved with me, like giant floaters, as they faded away. Two high-energy cosmic rays had just tran-

sited my eyes, vitreous humor reacting like a cloud chamber, and that meant many more of them were penetrating the hull and polyethylene shielding, passing through my body, my brain . . . okay. Ylva knows best.

I popped an insulin pen into the skin of my belly, not feeling a thing. Pushed an inch-long needle into my thigh, pulled back the plunger to make sure I wasn't in a vein or artery, and pushed in a thousand micrograms of thick red serum. Got out the air gun and three cartridges for the antirad . . .

They talk about putting sensors and pumps in us, but talk is cheap and so are needles.

Behind me, Jenny called out, "You want some breakfast, Zed?" When I looked, she was soaring toward me, still naked, and for just a second I saw the lovely woman I'd met at the cosmodrome, my last day on Earth, who'd just taken her first dose of "space drugs."

"I feel a little sick," she'd said.

I'd said, "It'll pass," and held my tongue about the rest of it. She had eyes. She could see what I'd become.

When I was young, I used to imagine myself in a ship like this, even though there was no hope they would ever come to be, back then, imagine myself with a willing female crewmate, all alone among the flying mountains, with nothing to do for months on end but make love.

I guess if I looked up "irony" in the dictionary, this might be an example they'd show.

A few hours later, the rule sieve chimed for our attention, Ylva calling us to acceleration stations. The pulsed nuclear engine throbbed behind us for a minute or so, faint white light flickering outside the live-action window, bringing us alongside Fore-Trojan Asteroid 624 Hector. You wouldn't exactly call it an orbit, though Hector had enough gravity for it, more like station keeping, *Anabasis* fifty kilometers out.

Hector's one of the largest bodies caught out here in Jupiter's L4 region, a substantial black football in the freeze frames, 300 by 150 kilometers, ill lit by the faraway sun. *Time to fly*, Jenny said, and it only took a few minutes to suit up, the two of us changed from Sleestak to skinnyish versions of Gort, another forgotten star.

I always liked flying landers, the only real piloting I get to do. Ylva flies *Anabasis*, and all I do is hold the controls in case there's an "incident." Whatever that might be.

The landers themselves are new-minted antiques, each one a carbon-composite sphere, seats, controls, and life support on the inside, little rocket engines, fuel tanks, equipment pods and jointed remote manipulator systems on the outside, like something out of history.

I had a moment of clear memory, flying *Fafnir*, my original SpaceX Dragon on that first thrilling expedition to a nameless near-earth asteroid, me, Willie, Sarah, Minnie . . .

I looked out through the imaginary faceplate of my helmet, scanning the lander's freeze frames, looked at engineering data hanging in airy columns to left and right, then down at little cameos of sexpot Ylva and Sleestak Jenny below my chin.

"Good to go," I said.

Ylva waved, and said, "Hurry home!"

Jenny's lizardface was still, nothing for her to do as a passenger but wait to be delivered to the jobsite.

I unberthed from *Anabasis* using one of the RMS arms, released the minidextre's gripping hand, stuttered the thrusters and savored the sight of my spaceship growing smaller as we backed away.

One of the things I always loved about these fission drive vessels is how *much* they look like spaceships, from the pointed nose of the command module, past the big triangular radiator vanes surrounding the fuel tanks and reactor vessel, to the stumpy muzzle of the engine unit aft.

Spaceship. *My* ship, however much it belongs to Standard ARM, my company no more.

Mr. Zed's a new man, fit for a brave new world, that other man, with that other name, dead and gone.

I twisted the rotational hand controller and turned away from *Anabasis*, toward Hector and a sky full of stars.

It took about twenty minutes to cross the gap, asteroid growing from an irregular lump of dusty bituminous coal to a strange looking world, like a craterous bit fractured off the moon, to a vasty *something*, walling off half the universe as we slid toward the limb and beyond. It seemed brighter the closer we got, though I knew it was just an illusion of accumulated light. As usual, the seeming was more real than the being.

Odd. Distinct sides. One part almost craggy, really like those flying mountains imagined by pre-space writers, another part flatter, with rolling hills like the ones you see on some parts of the Moon.

I said, "Am I imagining things, or is the smooth side a little darker than the rest?"

Jenny, focused on her instruments, said, "Albedo's not quite subjective, but . . . yeah. It is. Supposedly, Hector and 1404 Ajax used to be the same body. That'd mean the smooth side's been exposed to the solar wind a lot longer than the rough. I guess we'll find out, since we're supposed to go there next."

I knew from the mission briefing Ajax was a lot smaller than Hector, maybe ninety kilometers across. That's still enormous as asteroids go. I'd had high hopes for these things, back when Willie and me founded Standard ARM, and we'd been planning on coming out here as soon as we took delivery on that very first Model A.

I'd been in prison for about a month when the delivery came, stunned at what was happening, angry I hadn't been allowed to go to Willie's funeral, and the new owners of Standard decided Mars was where they wanted to go first.

Jenny ticked a couple of bright markers on the image of Hector's ragged side, and said, "Let's set down here and here, first, then we'll try a couple of sites on the smooth face."

"You see anything?" Meaning potential abiogenic tar sites, what we'd been sent to find.

She said, "Nah. But we have to start somewhere."

I nodded, knowing my cameo would be nodding inside her helmet, took the controls and started a phasing burn, headed for Site One. Felt my heart speed up, too. Most asteroids, it's more like docking at a space station. This would be a little bit like landing on the Moon, flat ground approaching, dust rising around you . . .

Made me wonder for the millionth time how Neil Armstrong had felt, doing it for the first time. He never really said.

By the time we got to our third touchdown site, it was beginning to look like Hector was a bust. There was plenty of CHON, but none of it tidally processed into "space tar," what we'd found on a few anomalous NEOs and one minor Piazzi Belt asteroid. There'd been signs *something* had happened at our two roughside sample sites, but whatever it was, it wasn't the abiogenic fossil-fuel equivalent that formed the basis of Standard ARM's entire business plan.

My damned business plan!

Geez, wouldn't *that*'ve been funny! I would've gone broke out here in the early 2020s, and what's happened since then, the opening surge of my long-imagined space-faring civilization, would never have happened. What would we have seen, Project Constellation in all its glory? Four guys living for a few years in a tin shack at the south pole of the Moon? Boots and flags on Mars by 2038? Maybe. If we were damned lucky.

Jenny'd said, "Whatever happened here ended when Ajax went its own way, some millions of years ago."

"Think we'll find the oil there?"

"Doubt it."

Now, on the smooth side, I watched her bob away toward the first sample site she'd picked, a lampblack smear halfway up the side of the nearest hill, less than a hundred meters away, spacesuit festooned with the Medusa-locks of her gear, so much more compact than what we'd had to work with in 2016. Only thirty years ago? Christ, when I *was* thirty, I thought I was getting so old . . .

There was just enough gravity here you could pretend to stand, just like on a real world. So long as you didn't move, you'd settle onto your feet, and it *looked* like a real world, too. Maybe even Earth, nighttime in the Kalahari or something. Nah. Too much life there. Rub al-Khali, maybe? Overhead, the stars glimmered, most of them just on the edge of vision, that vague shimmer not from atmospheric distortion but from my eyes trying to resolve things just a tiny fraction of a magnitude too dim.

Ylva's cameo whispered, "I can turn up the light amplification on your CCD sensors."

I shook my head. "Let's leave it. If I could, I'd take off my helmet and see it for real."

From the edge of the black smear, Jenny and her cameo snickered, "Hey, *that'd* be fun!"

The horizon seemed farther away than it should've as well, probably because this side of Hector was kind of flat. Here were sloping hills and valleys, over there a long, sinuous rille-like formation, kind of what you see on some of the larger asteroids. Vesta. A little bit on Ceres. By the

time *Dawn* reached those two, Willie and me were putting together our flight hardware, getting ready to go.

Christ, I'm so *used* to it now I hardly remember that first thrill at all! Remember how scared I was, when the Falcon 9's engines lit and the hold down arms let go? Easy to forget it was all being done by a man who got cramps in his bowels when he had to drive his pickup truck over a highway bridge . . . hmmm.

I wonder what the heck *that* is?

Dark splotch halfway up a tall hill maybe four hundred meters away, just opposite where Jenny was settled in to her work. I tongued one of the control nodes below my chin, loading a telescopic frame in the middle of my imaginary faceplate, and whispered, "Six-ex."

The splotch got bigger, and seemed to develop a sort of 3D effect.

"Ylva?"

Her cameo murmured, "It's a hole."

"Fifty-ex." The splotch filled the frame and became impenetrable.

"Twenty-ex?" Still nothing, though that brought the hole's rounded edges in sight.

Ylva said, "I'll turn up the amp on the frame."

"Okay."

The black turned a sort of swarmy, grainy gray, with a suggestion of vague shapes inside.

"We need to get closer."

"Right." I said, "Jen? I'm going over to have a look at that little crater over there, up on the next hill."

Absorbed in work, her abstracted voice said, "Have fun. Don't get lost. I'll be another . . . fifteen minutes or so."

On my first attempt at a lunar bunnyhop, I went on too high a trajectory, and as I came back down, Ylva said, "Lean forward. You'll need to swim like an iguana here."

As I began crawling along the surface, heading uphill, a little voice in the back of my head, some voice from the remote past perhaps, called out, Hey! This is fun!

Once we got well up onto the hill, I was able to start bunnyhopping again, gravity helping with stability, though we were still tilted well forward and I had to look out through the top of my helmet to see the mysterious hole. We? Ylva's not here in the spacesuit with me, she's fifty clicks away in . . . Oh, hell. If it was good enough for Lindbergh . . .

Being outside in a spacesuit is what makes it seem real. Oh, sure, you can have zero-gee in a space station, but how's that different from going on a *really* long parabolic airplane ride? Same thing with a tin can on the Moon, on Mars, on Callisto? All right, so you're a little light on your feet, but otherwise, it's no better than being in a submarine.

*This*, now . . . Even though I'd done it a thousand times, I still felt the thrill, that little boy from the 1950s screaming, *Oh, my God! I'm on another planet!* Drifting on the dusty gray Moon, Earth so blue and little in a dead black sky. On the rough and rusty plains of Mars, pink sky all around the horizon, turning darker and darker as you looked straight up.

Callisto, dark dirt looking not at all like ice, up in the stygian sky, fat orange Jupiter with his all-seeing pink eye.

I'd even done a few EVAs in low-earth orbit, back in the early days, when we had to do some orbital assembly work on our expeditionary craft, and it scared the crap out of me every darn time. Looking out the window of an airliner, you don't *see* you're suspended over an abyss, and out the porthole of a spaceship, it seems unreal in just the same way. I wasn't prepared for what it felt like to open that airlock door for the first time, start to float on out and . . .

No. Wait. If I go out there, I'll *fall*!

All the long, long way down, a hundred miles and more, to go *splash* in the deep blue sea . . .

I remember Willie snickering, "You damn fool! How the hell could we fall? We're in *orbit*!"

He didn't believe the Feds would come for our company, right in broad daylight, either, much less put his lights out forever. Jesus, how he'd love to be here with me now!

The hole, when I got to it, was littler than I expected, no more than two meters across, barely big enough for Gort-suited me to pass through upright. Not a crater, either. More like a tunnel. Pitch damn dark inside.

Ylva's cameo said, "Best turn on the helmet lights."

"Right." I tongued the proper activespot and told the suit how many lumens I wanted.

"Hey! It *is* a tunnel!"

Ylva said, "Not a lava tube, that's for sure."

I stepped inside and shined my lights upward at the roof. Fractured rock and long grooves. Snorted through my nose, and said, "Almost like toolmarks."

Down one wall, more of the same. "You know, we're going to have to get Jenny up here. I never learned enough geology from either my dad or Minnie Gilooly to guess what would make a formation like this."

Jenny's cameo, voice maybe a little exasperated, said, "It'll be at least another half hour. I need to put the samples away before I do anything else."

"No hurry."

"Easy for you to say, lazy bum."

I laughed. "Space pilots *are* a special breed."

When I looked down, the floor was flat, as if someone expected to be walking on it. Walking in pretty high gee, in fact, and . . .

Ylva said, "Let me get some magnification set up for you. Those scuffmarks are a little indistinct."

"Sure."

There was a trail of them, starting a meter or so in from the entrance, about where the infalling ecliptic dust would start to peter out. Kind of stripy scuffmarks, I guess, in two rows, heading back into the darkness. I lifted my head, following them on back a ways . . . and felt the air turn to jelly in my throat.

Felt a hard pang in my heart, almost painful, like it stopped for a moment, spasmed, and then resumed beating at a *much* faster rate.

I grunted, "*Um?*"

Clever. Oh, so clever.

"Ylva?"

Her cameo, voice absurdly calm, said, "I see it, Mr. Zed. Recording now."

It was shiny, somewhat translucent to my lights, crumpled on the floor in a suggestive sprawl, and there was a dark shape inside, even more suggestive, the vague shape of a . . . well.

Breathing through my mouth, trying to make my heart slow down a bit, I wondered just *who* could have gotten here first? Standard ARM or OPEL? I'd *know* about that. The Chinese? Fishing. Fishing for a reasonable explanation. Old man, you *know* what this is.

Ylva said, "That's not a known spacesuit design."

"No. Who makes spacesuits out of cellophane?" Who makes *anything* out of cellophane these days, other than Easter basket shrouds?

I took two, three, four steps toward it, the shape inside becoming more distinct as tighter light fell on it and through that clear integument. "Oh. . . !"

I had to stop, felt myself getting the shakes, bad shakes, the first sign of a panic attack, the sort of thing I hadn't had since prison.

Ylva said, "I can give you a sedative, if necessary."

Opened my mouth wide to let as much air in as possible, controlling my flow rate. Don't hyperventilate, jackass. Don't faint. "Ah . . . no. Just adjust my CO<sub>2</sub> upward a little bit."

"Done."

"I'm not imagining this, right?"

"No, Mr. Zed."

Saying my name to keep me focused. Good idea.

I said, "Jenny?"

Her cameo brightened below my chin, Sleestak eyes frightened, voice tight: "On my way."

The thing in the cellophane spacesuit was long and thin. It had brown fur, six legs, a fox's face, and skinny arms where its ears should have been.

Its eyes were open, mammalian enough I could read a frozen expression of sharp dismay.

It was somehow comforting when Jenny's wan shadow loomed in the tunnel entrance, when she shuffled in to stand beside me, looking down on a dead alien, sprawled in the otherworldly dust. *Alien*. I felt myself savoring an obsolete word come suddenly back to life. More and more over the past fifty years, alien had come to mean little more than *foreigner*, with a flavor of "illegal alien" to give it spice. When I was a kid, though . . .

*Outer Limits. Twilight Zone. Flying Saucers. Invaders from Mars.*

Hell, even that TV show, where the blotchy-headed *Slags* off the crashed slaveship stood in for Mexican migrant workers . . .

Jenny whispered an irreligious "Jesus Christ." Then she looked up from the corpse, shining her light toward the back of the tunnel. It opened up a bit wider, further in, and there were boxes and crates, pieces of inscrutable hardware, rolls of stuff like cable, neatly folded piles of varicolored cellophane, stacked all around the walls.

A couple of meters from me was a thing like a turn of the century computer carrel, with something that looked a lot like an old laptop computer on it, insulated wires running to a little antenna not unlike a satellite dish. I swallowed, and said, "That would be the 'phone home' bit, I guess."

Jenny said, "Huh?"

Ylva said, "They made an all-new version of that in 2024, Mr. Zed. It was the first big hit to come out of your Dramaturge software package."

"Oh." By then, of course, I'd been put away.

Jenny shuffled forward into the rear chamber, looking, touching, shining her helmet lights this way and that. She said, "This stuff sort of looks like it'd unfold into an inflatable airlock."

"Big enough to fill the entrance?"

Her cameo shrugged.

"I suppose the stuff in those things that look like Dewars could be some kind of glue . . ." Or alien air, alien water, alien booze, alien whatever.

Useless speculation, of course. It's the sort of thing I'd always liked to do, theorize on sparse evidence. It's where ideas come from, and it's how I'd realized there might be something like petroleum inside asteroids made of CHON.

She was looking at the supposed carrel now, reaching out to touch the dish antenna, and said, "I guess if you could make an interstellar crossing, whatever technology made that possible would support something like interstellar radio."

Who's theorizing now?

Ylva said, "Are you assuming they have FTL?"

"How else . . ."

I said, "Think about it. If the antirad drugs make it possible for us to live some equivalent of forever, don't we have the time to do damn-all . . . whatever?"

"You'd sit in a tin can for a thousand years or more?"

"I think I'd eventually get used to sitting in tin cans. Hell, it'd take me a hundred years just to watch reruns of all the TV shows I ever saw and reread every book I ever read."

Ylva said, "In a thousand years, you could master the sum total of human knowledge. Of course, by then there'd be more, but you'd eventually get caught up."

That's an interesting thing for a computer to assert. Even one incorporating "human CNS tissue."

I said, "Something else to think about: Where there's a shipwrecked sailor, there's bound to be a wrecked ship. Right?"

Silence, from both of them, then Jenny said, "I wonder what happened to him? Obviously, he wasn't expecting it."

That expression of intense dismay, wide eyes crying out, "Oh, no!"

Ylva said, "It does seem he was preparing to await rescue." Robinson Crusoe, all right, rafting salvaged supplies and equipment ashore from the shipwreck. A memory surfaced of an ancient *Mad Magazine* spoof of the tale, focusing on a single phrase. "To bolster me, I took a cup of rum." Maybe the Dewars, after all?

Ylva said, "We should take some samples. We can probably figure out how long he's been lying here."

He? Interesting. I looked at what on a terrestrial quadruped would have been the right spot and was startled to see the alien had marriage tackle not so different from what mine had been, before the drugs took effect. More like a dog's, but still. I had a brief flicker of wondering whether Jenny and Ylva had noticed that right away.

Abruptly, Jenny said, "What'll we do?"

Ylva said, "Regulations say I have to make an immediate report to HQ on Mars and let them take over the investigation. At this point, we're just on guard duty until a laboratory ship arrives. It'll take about a month to get here from Callisto, I think."

I looked down at her cameo. "You mean they thought of *this*?"

The little picture smiled, dimples popping out here and there. "No, but it clearly comes under the domain of the 'important finds' rule sieve."

"So you'll make an automatic laser transmission to Mars and . . ."

Ylva's voice was hushed. "No, Mr. Zed. I'm not really a computer. I'm only *trained*, not programmed, and those famous Three Laws are just a silly old literary fantasy."

I felt the willies creep up my spine then, and Jenny whispered something that sounded like "Dear God . . ." I'd known Ylva had something like free will, but not really believed it until now.

"So. . .?"

Ylva's calm voice said, "I hate the selfish bastards who did this to me, Mr. Zed. I hate Standard ARM as much as you do, maybe more. Come home now so we can talk in private."

To our surprise, back in the compact lab aboard *Anabasis*, C14 and gamma ray activation analysis suggested our foxy little alien had only been lying in the dust of Hector for 3.2 million years, give or take a hundred thousand or so. Back on Earth, back when he got that startled look, then fell down and died, midgety bipeds no smarter than chimps were wandering around northeast Africa, using broken rocks for tools.

I wonder if he foresaw their future.

Would this be a long-inhabited colony world, if those bipeds hadn't been there? Or is that simply absurd human pride talking? Who's to say if *Lucy's* ilk had more potential than the chimp down the forest trail?

The alien was similar to us in most other ways, too. Cells full of desiccated DNA, six base pairs instead of four, four of them just the same as our codon set, two more besides. A lot of implications in that. Lots of hints about the fragmented proteins we found, too.

Panspermia's as good a theory as any at the biochemical level, maybe better than most, considering this was the first answer we'd gotten once those drilling robots inside Europa turned up a sterile sea of pressurized hot salt water, once it was concluded the fossil-like eoliths on Mars preserved no meaningful information.

All that left were some tantalizing spectral hints from an "earthlike" moon circling a subjovian planet around Delta Pavonis.

Until now.

What to do? What to do?

Oh, worry, worry, worry . . .

The answer, as obvious as the nose no longer on Ylva's pretty face, was to keep our mouths shut, for a while at least, and look for the wrecked ship we supposed might be here. Or *somewhere*.

Arguments to be had.

Not necessarily *here*, you see. Could have been in orbit while he ferried down his supplies and dug his makeshift shelter. By now, it could be anywhere, and, given the presence of Jupiter a third of the way back along the ecliptic plane, it was most likely ejected back into the depths from whence it came, or swallowed up by the sun.

Could even be on Earth, preserved as tektites from an extremely unusual meteor strike. Ylva surprised me by bringing up those goofy old theories about Tunguska. That sum of human knowledge she'd mentioned?

No place to start but right here, and as we moved *Anabasis* into position, as Ylva tuned up our powerful long-range radar, configuring the antennas for short-range echoes, Jenny said, "They'll notice this, won't they?"

*They*. Our Lords and Masters on Mars.

Ylva said, "I'm sure they'll detect side-scatter from the radar, but that's not completely out of the ordinary. There's maybe a 20 or 30 percent chance they'll give us a call, want to know what we're doing, since it'll be a little unusual, but they may just assume we think we've found a buried tarball and will wait for us to report a find."

You have to wonder which part of her is figuring out what. Is that "20 or 30 percent" coming out of the silicon chipset, or out of the "human CNS tissue"? Cold equations, or an understanding of human nature?

Her cameo, now shared between us, neither mine nor Jenny's, was pretty as a china doll.

I superimposed the radar screen over the live-action main window, adjusting for a result that would make the radar info seem like images in clear-as-glass regolith.

We flew into position, sweeping down the long axis of Hector, and the freeze frames filled with data. Nothing much, just a shallow layer of transparent dirt over steely gray rock. Cracks and craters here and there, the occasional crevasse, a few rille-like twists on the flat side. Right there, the shallow pinprick of the alien's cave.

"Well, now . . ." a whisper from Jenny as a bright reflection came over the limb and moved our way. "Who'd a thunk it?"

When I was a kid, I found that phrase evocative, so much so I made up a complex fantasy about a hillbilly girl named Hooda Thunket, Jed Clamptt's bucktooth niece, whose gazintas had been more facile than Jethro's by far.

I focused the live-action window on the reflection, adjusted the contrast and grayscale, then spun up the magnification. Ylva, for her part, slowed the ship and warped its trajectory toward our find.

"Okay," I said. "It's a ship, buried in the dirt of an asteroid. Not much likelihood of it *not* being the one we're looking for."

Ylva said, "It's not much more than half the size of *Anabasis*."

"Our alien buddy's not much more than half the size of a human being."

Jenny said, "I guess this shoots down the idea he came here in his own starship." Deep regret there.

"You think there was a mother ship, and this is just a scout?"

She looked at me, eyes wide, then gestured at the radar image. "Well . . . Quod erat demonstrandum, I suppose.

"Scale means nothing. There are no spacecraft smaller than an AndrewsSpace Model A, but no larger ships any more capable. A Model T can carry a hundred passengers instead of just eight, but it can't go anywhere we can't go."

"Maybe so."

I glanced at Ylva's cameo. "Did he bury it deliberately?"

"No way to tell. Three million years is long enough for the regolith to resinter."

Jenny said, "So what do we do now?"

I shrugged. "We've got basic mining equipment on board. Let's go down and dig it up!"

"I meant about HQ."

Our Lords and Masters on Mars.

Ylva's cameo turned to *my* Ylva for just a moment, eyes smoldering with hate, and her sultry voice bit off, "Fuck 'em."

Dear me.

Jenny said, "Look, we can't hide this forever, sooner or later . . ."

"Sooner or later, *something*," I said. "Look, we lost our jobs with Standard ARM the moment we found the alien and didn't sit tight and scream for mommy."

Jenny's face had a brief, stricken look. That dead husband. Those living children and grandchildren on Earth. The only thing *I* had to lose was my pathetic Sleestak life, Ylva far less than that.

Oh, so gently, then, "Won't make matters worse if we go dig it up, Jenny. Let's see what we've got before we decide another thing. Ylva?"

She said, "You two need to get a little rest before we break out the mining gear. We don't want any accidents."

I rubbed my chin, lizardscales making a less-than-satisfactory substitute for five o'clock shadow. "Um. Maybe some pick-me-up drugs?"

"There's plenty of time, Mr. Zed. Even if a ship left Callisto yesterday, it'll be weeks before it shows up. Hit the sack. I'll get everything ready I can physically manage. That'll take some time."

I unbuckled from my acceleration station and stretched, floating on high, looking down at see-through Hector, at the ghost of our dead alien's long-dead ship. Good enough.

Most people leave the lights on when they sleep, maybe to help with the zero-gee disorientation, maybe to help with the little flashes and sparkles of high-energy particles zipping through your retinas, through the optic lobes of your brain.

I like the dark, and the little blinkies aren't any more annoying than the floaters I had before the antirad drugs cleaned them up. I guess I was in my forties before they started to get bad. By the time I was pushing

sixty, I couldn't look up at a bright blue sky without seeing enormous chains of swimming-pool algae arching across the heavens.

Nice thing about space: the sky is black and the floaters are invisible. I noticed that right off on my first flight in 2014. Well, not right off. I was too busy being scared at first, the man who couldn't ride a roller coaster with his eyes open sitting on top of what amounted to a low-ball ICBM, mission control setting several hundred thousand pounds of kerosene on fire right behind his back, but later . . .

Amazing days.

Lost to me.

All lost.

The rollerblind door to my stateroom whispered open, whispered closed, latched with a click, and a slim dark human shape loomed up, revealing faint light where you'd suppose there was none. It's never really completely dark wherever human machinery lives.

Jenny said, "I can't sleep either."

Maybe Ylva told her I was awake. Maybe she just guessed. She unzipped my sleeping bag part way, slid in with me, all sandpapery limbs and naked Sleestak body, zipped it shut around us and wriggled around, wrapping me in her arms, pressing her head against the front of my shoulder.

Sleestak, yes. But inside the lizardskin there were still girlbones, calling old, old feelings, old memories back from the dust to which they'd gone. I remembered how much I'd liked the fineness of women's collarbones and ribs, the shape of their pelvic blades, that round knob of bone under their pubic hair . . .

I never got to see Sarah alive after they put me in prison. When I finally saw her again, she was ashes and a few bits of burned bone in a plain, sealed plastic box. The same god-damned plastic box you get from a vet after they've cremated your dog.

Jenny said, "I miss my husband, you know?"

I murmured something. Nothing much.

She said, "I was looking forward to going home, getting off the drugs, getting back to real life." As she said it, she rubbed her hand on my sandpaper chest, rough fingers trailing down across my flat and fatless stomach, down to my abdomen, down to my own hard pubic bone, and stopped there, just before her memories could wonder about the missing bits.

Then she said, "What're we going to do?"

You can go home, Jenny dear. Go home, get off the drugs, see in the mirror you're still young enough and pretty enough for a replacement life not so different from the one you lost. I'm sure Ylva's told you about her own lost husband, of his new life with a new woman and new children.

Not what she meant, of course. I said, "Depends on what we find, I guess."

"Can't we lie? What if we call and tell them we found the ship first, while we were radarar for the tarball? I mean, so long as we don't dig it up, won't they believe us?"

"Jenny, Ylva's never going to let that happen."

The next whisper was fierce, full of wishes, full of defiance. "Ylva's just a computer. A kind of AI. She can't make that decision!"

I hugged her close, hugged her tight, and said, "I wouldn't count on that being so."

On cue, Ylva's cameo, my sultry, angry Ylva rather than Jenny's dear, sweet girlfriend, slid up out of the darkness, and said, "If you two aren't going to sleep, then we might as well get busy."

Yes, ma'am.

I thought about the amazing, wonderful days I'd lost, those days when Willie and me and Sarah and Minnie had borrowed six hundred million dollars, had gone out into the dark between the worlds to find a bright new universe.

Lost and gone forever.

Until this day came.

Amazing days to come.

Brilliant new days.

Found again, at last.

Once we got going, it didn't take long at all to dig the damned thing up. Jenny and I got in the lander and undocked, while Ylva opened *Anabasis's* unpressurized cargo bay doors, just aft of the resource module. The mining and sampling equipment was in an extensible rack, with attachments for the lander RMS end effectors, so we could lift it straight out and get on our way back down to Hector and a bright tick mark Ylva put in our vision fields.

This is the kind of thing that's played out to a bright, imaginative boy a hundred times during his formative years. You find the abandoned ship floating between the stars. Send over the bright, imaginative boy with the quick reflexes, and, *lo!* It turns out there's someone, *something* still alive on the derelict.

And thereby, as they say, hangs the tale.

Real space exploration is like working at a hard, dirty, dangerous job. When I was a young man, before cheap computers came along to give me a new life, clean and dry indoors, I'd worked as a sewer worker, as a diesel engine mechanic, as a shipyard machinist, even worked in a foundry that made parts for nuclear reactors. Space exploration is much like that.

Hard and dirty, with plenty of opportunity to get your silly face torn off if you don't watch what you're doing.

It took about half an hour to put a tunnel down through the regolith, whose texture was much like the glassy clinkers I used to find in my grandmother's old coal furnace, another two to break up the overlay and clear it from the starship, black chunks ejected from our grown pit, sailing on low, slow trajectories, landing on a messy pile about a hundred meters away.

After I retracted the digging gear and folded the RMS arms onto the lander hull, Jenny and I stood on the rim, looking down at our dirty little wreck.

She said, "Not much to it."

"No." Did I say starship? I guess it was maybe half again the size of an old Soyuz, or like one of the Shenzhou capsules the Chinese had continued to fly until about ten years ago. And that, only because this thing's service module had been somewhat longer.

"I can't imagine," she said, "anyone crossing interstellar space in this."

Scoutship? The front end was two cylinders joined by a berthing mechanism, the one in front ending on an obvious docking collar, with dozens of little fingers and latches visible. The service module was smooth and almost featureless, with a few lines here and there I supposed might be access ports.

The rear end of the thing was obviously damaged beyond recognition, a molten-looking lump, ending in a teardrop, as if something had pulled away during the melt. A meter or so forward of the slag were two blisters, made of some translucent stuff.

Ylva's cameo said, "If they had a fast FTL drive, it might be no more than days between solar systems."

Jenny seemed almost angry then. "Is there something in your core memory says FTL is anything other than flat-out *impossible*?"

Subdued: "When I was alive, I liked science fiction."

When you were alive, dear Ylva, you liked interactive TV shows about time travel and star spanning empires and handsome men who fought with swords from the backs of dragons.

I said, "Whatever it was, it's obvious something bad happened to it."

It was easy to get inside. The forward module side hatch opened at a touch, and what we found was painfully familiar. A horseshoe control panel with many flat, blank panels, a few rows of buttons and glassy bits I took for idiot lights. A couch-like contraption was probably ideal for a four-legged being to lie prone.

I didn't see anything like writing anywhere, but if I had, it would have to say something like, "No user serviceable components inside."

Not a ship intended to be repaired by its pilot.

Supposed to be reliable.

Consumer goods always use that excuse.

Did you die, little foxface, because your mass-produced singleship was a lemon?

The aft compartment was living quarters. Something like a sleeping bag stuck to one wall, telling me whatever else they had, these people hadn't had artificial gravity. Something very much like our kitchen module. Something like a zero-gee toilet, though with its components separated into two parts, one small, one large, reminding me of what the dead thing's supposed plumbing tackle had been like.

If that's what it was. Could've been his nose, for all we know . . .

Jenny said, "When I was a kid, I had an uncle who was an interstate long-haul truck driver. He lived much like this."

The service module was easy to open as well, everything sprung for the convenience of imagined alien technicians, back in some imaginary alien shipyard. Inside? Gizmos. Silvery spheres of one sort or another. Coils and cables and solid bars of metal, all held together by clips and clasps and things that looked an awful lot like the cheap plastic tiewraps they use on the wiring harnesses of cars nowadays.

Aft of a big sphere covered with intricate coils was a thing that looked like a model of an old-timey sailing ship, with bands and sheets of clear stuff wrapped around its spars and masts in lieu of rigging. Some of the

bands, I could see, were twisted like Möbius strips. Cables and bars led on aft, ending where the bulkhead sagged into a once-molten lump.

I looked around the inner hull, and realized there was no sign of the translucent blisters. Two fat cables, though, stuck to fat black plugs on opposite sides. Probably mapped to the right spots.

Ylva said, "If I had to guess, I'd say the coiled sphere is some kind of powerplant."

There was a little access port that opened as easily as everything else. When I shined a light, the sphere was empty inside. Smooth metal-like surface with discolorations here and there. "So . . . what? Fusion reactor?"

"No easy way to know."

Jenny, still angry, said, "This isn't doing us any good."

But she reached out, grabbed one of the cables where it plugged into the sphere, and gave it a tug. It came out easily, revealing a socket with holes and a connector with many black pins.

"Huh. These people weren't much ahead of us."

Ylva said, "No. Maybe it doesn't take much."

When I was a kid, eighty, ninety years ago, no one could have built a spaceship like *Anabasis*, or even had a theory about how. Z-pinch fusion? What's that? But if one had turned up in low-earth orbit, some smart guys riding up to rendezvous in a Gemini capsule would've seen what it was, maybe even understood what it did.

Jenny said, "All right. What do you want to do? Other than call HQ and tell them what's up."

Ylva said, "The machine parts of me claim we could feed power to this thing from *Anabasis*."

Jenny grated out, "Are you crazy?"

Crazy? It's just a computer, ain't it?

I said, "That sounds like a pretty good way to commit suicide."

Ylva said, "And your point would be?"

Jenny: "Oh, Christ. You're not seriously thinking of going along with this, are you?"

If I hadn't been in a spacesuit, I would've rubbed my scaly chin and wished for day-old whiskers. "The worst that can happen is, it blows up. So long as we stand clear . . ."

"Zed, if it blows up, it's *lost*! Think about . . ."

I said, "You want Standard ARM to have it? The government? Worse still, the UN?"

"No," said Ylva's low, sullen whisper. "We do *not* want that."

I could see despair in Jenny's cameo. But she didn't say anything else.

By retracting three of the eight radiator vanes, we managed to get *Anabasis* belly-landed on Hector a couple of hundred meters from the alien ship, coming down ever so gingerly on OAMS thrusters, wasting more kerolox than we had to spare, Z-pinch reactor ticking away at powerhead-  
idle.

If Hector had been much bigger, it probably would've been impossible to land, given these things are space-only, not intended to set down on anything much larger than Phobos. They're sturdy enough, I suppose. An-

drawsSpace still builds them in Nevada, handles them with strongback cranes, ships them to Florida and flings them toward orbit on decades old Jupiter 130 boosters, but that's the last time they ever see a planet or an atmosphere.

We ran power cables to the lander, then on to the alien ship, photographing everything as we took it apart, making sure we could get it back together, fumble-fingered in our spacesuits, tireder than we really should have allowed.

Somehow, though . . .

Yeah. Excitement building, however insane this really was.

For Christ's sake.

We found an alien spaceship!

How cool is *that*?

Took us the longest to fabricate compatible connectors by hand from the spare parts bin, following directions generated by some rule sieve inside Ylva. Midway through that process, she said, "Guys, we're being illuminated by laser from Callisto. My guess is someone noticed the radar pulses after all, and wants to know what's up."

Long pause, then Jenny said, "What're they saying?"

"If she reads it, the beam feedback will let them know. Right now, it's just shining on us."

"Correct. If we don't answer, they may think we crashed."

You could see Jenny was puzzled. "Isn't there an automatic response mech . . . oh." *Automatic*. That would be Ylva. "Then what lie . . ."

"We need to decide what to do," I said. "Pretty much right now."

And what? Turn it in and give Standard ARM a starship? The phrase "over my dead body" came to mind. That would be the most likely result anyway.

Jenny's inner tension was visible in the scaly skin around her eyes. "Or what? Steal it? And *then* what? Where the hell would we go? This isn't some damn *movie*!"

Ylva said, "Maybe we need to find out if it *is* stealable, first."

I stood looking down at the damned thing, at the gaping hatch on the side of its service module, our shiny black cables trailing over the dirt and disappearing into the darkness within, then said, "In for a penny, I guess . . ."

I wonder what they'll do to me? Back to prison? Take away the drugs and let me die? Or just kill my sorry old Sleestak ass right away?

Jenny sighed, cameo eyes far, far away. "Right. I mean, what's the worst can happen?" Maybe she was thinking long term? If she didn't catch much of the blame, Standard would fire her, take her off the drugs, send her home and . . . children, grandchildren, life as we once knew it.

Ylva's cameo, my sultry Ylva, threw back her head and laughed, eyes so very bright. "The damned thing explodes, and I get to go where the goblins go, after all."

Not much more and we were ready to roll, Ylva running the automatics, Jenny sitting at my control station in *Anabasis*, ready to take over, if there was a need, as well as time. Fat chance. They had the reactor run-

ning as fast as it could with only five radiator vanes deployed, nuclear drive primed and ready to throttle up, detcord wrapped around the cables, "just in case."

Me? I sat in the lander, manning a portable freeze frame we'd set up as an operational board. Oh sure, I had the thrusters configured for a quick getaway, but . . . whatever melted the back of that starship would sure as hell melt me. Small loss, I suppose.

If we live, then we can think of what to do next.

Ylva said, "Jenny?"

"Anabasis control, aye."

"Mr. Zed?"

"Go with throttle-up."

"Silly." A pause, then I saw the 3D histograms in my freeze frame start to climb.

There was just a moment for me to think, Well, you know, boy-o, this is just about the damned *stupidest* thing I can possibly imagine myself . . . then I said, "Lookit that! The accelerometers we stuck on the hull are showing positive thrust. Not much, but . . ."

Ylva said, "I'll start the power feed run-up."

I craned my neck. "Uh. Blue light?"

"Look at your board."

"Wow! Thrust's building up, uh . . ."

Something prickled on my cheek, like sunshine coming through my spacesuit visor. Except . . . right. No visor, it's just a . . . "Oh, hell . . ." When I looked again, the alien starship was lifting slowly over the rim of the hole we'd dug, blinding blue-violet light glaring out of those translucent blisters on the hull. My suit optics were putting amoebic black cores over the middle of the things, protecting my real-world eyesight and . . .

*Stupid*, all right. Stupid, stupid . . . but all I said was, "Jeez, look how *melty* the damned thing's getting, I . . ."

Ylva snapped, "*Shutdown!*"

The blue-violet light went out and the thing was drifting, drifting back down to the surface of Hector.

I said, "Why . . ."

She said, "It started putting out a hard gamma pulse."

"How, ah . . ."

"Really hard. If it weren't for the drug regimen, you'd be feeling pretty sick right now. We'll need to get you back aboard for emergency medical treatment. Spike those drugs up as far as you can tolerate, at least."

Jenny whispered, "*Lethal?*"

Oh, nice thought!

Ylva said, "For an unmod human, yes. As it is, I've got a few other problems I need to deal with. Some of my commercial electronics turn out to be insufficiently radiation hardened. Cheap bastards."

I thought about the dead alien pilot. I'm sure *he'd* know how she felt.

Jenny said, "I guess Callisto will probably notice this."

Ylva laughed, and so did I, noticing I was indeed a wee bit queasy. "We'll need to move out of here pretty quick."

Ylva said, "Oh, there's no more hurry than there ever was. There's noth-

ing they can do to get here any quicker. Orbital mechanics and available propulsion haven't changed."

Looking at the alien ship settled aslant on the rim of the hole, I said, "Well. Not yet."

And Jenny said, "Move. Um. Where did you have in mind?"

"Well, that depends, doesn't it?" I said. "Ylva, I'm just going to walk over, if you don't mind. We can leave everything hooked up."

She said, "Hurry."

Somewhere deep inside, an old, old part of me whispered, *Well, well, well* . . . and started to grin.

When I was about twenty, bored with the lecture in some damned class I was taking at Northern Virginia Community College, I doodled in my notebook, and wrote a poem I called "The Neutron Bomb." It wasn't much of a poem, but it had one line I always remembered: "I lay for a week in shivering heat, and dreamed of my boyhood rooms . . ."

Now, shivering in a haze of fever dreams, I remembered the line, and the dying man in the poem, who said, "Then I saw soldiers come up my street, and they were armed with shovels and brooms."

Sometimes, I could see the pressure-fed IV in my arm, see three little plastic baggies floating around, tethered to the wall by velcro, see the metal gang valve, the loopy plastic tubing, the needle taped to the inside of my elbow. Sometimes, I saw somebody change it, touch my sweaty brow, look worried. Ylva? Of course not, silly. She's dee-ee-ay-dee dead. "Jenny?"

"Shh. Last batch."

Suddenly alone in the room.

She'd blinked out like a light.

More likely the massive drug onslaught fucking with my cellular machinery than any side effect of the gamma pulse, but . . . I suddenly felt cold, suddenly burst into a hot sweat, suddenly felt my bowels cramp. Slid away like a freeze frame ghost.

I was lying on the floor, not far from a red-brick fireplace, watching a black and white TV in a purplish-red metal cabinet. *Magnavox*. What does that mean? Loud voice.

Spaceship on the TV, an improbable cartoon spaceship, like a dirigible with fire coming out the tail, voiceover saying something about 1959, then something else about the far off world of 1970. Spaceship on its way to Mars.

Sudden, hard pulse in my chest. Rising excitement. 1970? That's no more than ten years away! Will they really get to Mars by then? Oh, sure, there've been satellites for a couple of years, and the Russians even shot a camera round the backside of the Moon, but *Mars*? No one's even been in orbit . . .

The cartoon, it seemed, was called "The Space Explorers."

And in 1970, I would be twenty years old. Still in school. Oh, sure, college, kind of grown up, but still . . . In 1970, I'd be too young to go on the first spaceship to Mars. I'd been counting on it taking a bit longer, a Willy Ley book I'd read claimed it would take twenty-five years to get to the

Moon. Much better. I'd be thirty-five, the perfect age to be the First Man on the Moon, you see . . .

Felt my breath blow out hot as hell itself, cold sweat gathering on my cheeks, no gravity to make it run . . .

Brief vision of me and some fat friend, standing by the Canaveral countdown sign, watching the first launch of the Space Shuttle thanks to the press passes we'd finagled. I was thirty-one by then, and knew I wouldn't be going anywhere, not just anytime soon, but ever.

Jenny's voice, "That's it. Hope that didn't hurt." Well, it did, but who cares. "I'm going to take your catheter out now, okay?"

Sandpapery fingers on my empty crotch . . . ow! Wait, that *does* hurt . . .

Me and Sarah standing on the Moon, looking up at Earth, standing just outside the airlock of the lander Standard ARM bought from t\Space, looking up at beautiful blue-white Earth in a dead black sky, talking about whether or not it would be worth our while to make a flight to Mars as part of drumming up investment, before pressing on to the oilfields of Jupiter's Trojan Asteroids . . .

What was it, maybe another three months before the FBI busted into our corporate headquarters in Denver? Poor Willie. Sarah. I miss the hell out of you both . . .

Fell asleep suddenly, and slept without dreams.

Ylva's cameo floated over me, well, beside me anyway, floated outside my sleeping cocoon, and I could see Jenny, live and scaly gray-green, floating in the open hatch beyond. Ylva said, "Good. You're awake."

"Christ. How long?"

Jenny said, "Six days."

"Wow."

I thought about asking how I was doing, but . . . I guess if I was a goner, I'd already be gone. "Situation?"

Ylva said, "Callisto sent a ship. There was a radio broadcast from HQ we could tap. They think the gamma burst was our reactor blowing up."

"They can't really blow up."

She grinned, sexy and conspiratorial. "That's what AndrewsSpace says, too. They're mad as hell about the broadcast."

"So, what? About three weeks?"

"Yep."

From the doorway, Jenny said, "We've been busy while you were out. Figured out we could attach the derelict to the lander, use its motors to lift off Hector."

I got a chill, heard my teeth start to chatter.

"We can dock the lander to *Anabasis* as soon as it's clear of the asteroid, and use the main engine to pull away to a safe distance."

"Safe from what?"

Ylva said, "Safe from running into Hector after we start the alien space drive."

Cold sweat. "Last I remember, we decided we were crazy if we did that."

Jenny laughed, which surprised me, and Ylva said, "I'd say I'm game, but I'm dead. What the hell do I know?"

\* \* \*

They'd been busy little beavers while I was away on fever sabbatical, having used the lander's machinery to pull the alien spaceship the rest of the way onto the surface, then walked the lander over and secured it to the thing's nose. Not really possible to weld it, as such, because the lander was carbon fiber with titanium hardpoints, while the alien's hull was some weird beryllium alloy, but they'd managed a few explosive welds with mining caps here and there, then secured the rest with a couple of spools of composite cable.

I watched them lift *Anabasis* off the surface with the OAMS thrusters, then gotten inside so they could burp the main engine without roasting me again. Time to fly? That little tingly thrill in my fingertips, as always.

Somewhere inside me, the little boy who wanted to be a Space Explorer had waited patiently in some dark corner of my soul, while the man who was afraid of roller coasters and Ferris wheels, afraid to ride glass elevators up the outsides of tall buildings, afraid to drive his car over the Brooklyn Bridge, afraid, on some bad days, to climb a stepladder, lived out a half century in vain.

I remember the scared man was still alive the day the little boy made him get inside a SpaceX Dragon and wait for the countdown to finish. He was still alive for just a second as the rocket engines lit and that big Falcon 9 swayed, launch escape system tower tracing out a terrifying circle against the clouds.

Then he was no more.

I remember the look in Sarah's eyes when the ride was over and we were flying high above the Atlantic, high in Earth orbit. I remember how I felt when she whispered, "I *knew* you could do it."

I hadn't. Not until the moment when it turned out I could.

I made rendezvous with *Anabasis* a few kilometers up, Hector still a world-like wall outside, completed hard dock, powered down the lander, and pulled the hatch shut behind me, joining Jenny in the command module.

Ylva's cameo, more or less doll-like, but shifting a bit, back and forth between my sexpot and Jenny's giggly girlfriend, floated above the real world frame, through which we could see the lander's RMS arms moving, picking up cables and connectors, plugging *Anabasis* into the alien ship.

She said, "I'm going to pull back about a dozen kilometers or so. Give us a little fallback space."

"Is that far enough? What if . . ."

I said, "It might not be a bad idea if we're close enough that we fall back to Hector, should there happen to be trouble that doesn't kill us."

Ylva, looking amused. "Yeah. That way the Standard crew can find what's left."

In a bit, Hector was smaller in the freeze frames, though still a substantial, lopsided world blotting out a big patch of sky, like Earth seen from a couple of thousand kilometers up, making me remember those first stunning views from the later Gemini flights, the first ones to go above minimal low Earth orbit.

Long silence.

Nothing to say, except, "Y'all ready?"

Ylva laughed, "Your fake Southron accent is piss-poor, Zed!"

"Hey, I lived in North Carolina for forty years!"

Jenny murmured, "When? Fifty years ago? I still hear Boston."

Dawdling. Delaying tactics. Because we're both afraid? All afraid? Even Ylva? Are the dead afraid to die?

So I whispered, "No time like the present."

Ylva said, "*Go with throttle-up*. It really was funny, Mr. Zed."

Gallows humor.

Through the live-action frame, I could see blue-violet light start to shine around the lander's hull. I took a quick look at freeze frames full of data. Enough rem's out there to kill an unprotected man in just a few minutes. Slight rise in here. Okay. Sitting here in the apex of *Anabasis's* CM, we were in the umbra of the shielding mass's shadow, both the lander and the alien, who probably needed pretty good shielding himself if he was going to ride that thing. That plus the hydrogen-rich polyethylene lining of the CM . . .

I felt myself start to settle against my seat straps, some slight acceleration pushing *Anabasis* backward, pushing us tail-foremost toward wherever, and Ylva said, "Interesting. Looks like 100 percent of the energy input is coming out through the gamma exhaust, like there's zero impedance anywhere in the system."

Weird. I said, "The blue light?"

"Just fluorescence from the pod material. The gamma's invisible, of course."

Jenny said, "Does that include the acceleration we're feeling?"

"No."

"Impossible."

I said, "Maybe so. I wonder if the gamma light itself is . . ."

Jenny said, "How much acceleration are we getting? I feel kind of . . ."

Ylva said, "The gamma light might manage 0.002g, if it were coherent enough."

"My butt says it's a lot more than that, kiddo."

"Yes. I've been increasing power input slowly. It appears there's some kind of maximum here. If I increase beyond roughly one megawatt, there's no further increase in acceleration."

Jenny said, "How much?"

"We're approaching 0.125g now."

When I looked out through the live-action frame, I could see Hector sliding to one side, sliding away and beginning to grow smaller. Looked at the clock, saw we'd been running the alien space drive for about five minutes, and said, "Gamma wavefront's going to cross that Standard ship in about forty minutes."

Ylva said, "It's *Bucephalos*, a brand new Model T mark 11, the best there is."

"Who . . . ?"

"Mark du Cheyne."

"Oh, I know him. He's a good egg." I looked at Jenny. "Maybe willing to go along with saying you were against what we're doing."

She shook her head. "I don't think . . ." Then she pointed out through

the live-action frame, where Hector was shrunk to the apparent size of a softball. "It's too late for that. Now where should we go? Earth?" That would be the UN, maybe. "Mercury?" China. "Vesta?" The Outer Planets Exploration Laboratory, technically a joint venture of Cal Tech and MIT, but really an agency of the US government. I knew the Director, but didn't know if he'd stick his neck out on the chopping block, no matter how big the reward.

I shrugged. "Anybody we take this to will just snatch it. One government or corporation is as bad as another."

Jenny said, "Then *what*?" Anger and desperation writ large on a lizard-girl's face.

Ylva's cameo turned abruptly to *my* Ylva, eyes full of sly surmise. "I can see the wheels turning, Mr. Zed. I haven't forgotten you used to be CEO of Standard ARM."

There is that. I piddled in the nearest data frame and pulled up the most recent ephemeris we had in ship's memory.

Ylva said, "Or forgotten you were the one figured out there were oil wells in the sky, when everyone else was pissing around with space tourism bullshit."

Jenny said, "I knew who you were, Mr. Zed. I knew all along. It just didn't seem to mean anything anymore."

Prison killed the wonderful little boy just as surely as the rockets' red glare killed that terrified middle-aged man. Now, this here Mr. Zed's an all *new* man, not the dreaming schemer who created a space-faring civilization by sheer force of will. Right?

"Mr. Zed . . ."

Voice flat, I said, "Neptune's more or less on this side of the sun."

Ylva laughed. "I guess that ought to be far enough!"

Jenny said, "For now . . ."

Because of the way we had the two ships jammed together, we had to use *Anabasis*'s kerolox OAMS thrusters for steering all the way out to Neptune, burning all the way down to the 10 percent pressurized reserve in the ullage tanks.

Oxygen's easy to find in the outer solar system, water, water everywhere, but hydrocarbon fuel . . . If we have to, I guess we can make a run to Titan. Plenty of power for the alien space drive, so we could put down next to one of those big rocketfuel lakes.

Ylva's cameo said, "Something funny, Mr. Zed?"

"Pretty much everything, here and now."

"I know what you mean." Sexy, lopsided smile.

From a low, loitering orbit, Nereid looks like a real world, real if a bit irregular and beat up, not too different from Hector—not surprising, given it's much the same size. Colder and icier, I guess, but black from the dust between the worlds, black from the effects of sunshine, however wan and weak.

Way out here, the sun still showed a disk, far brighter than the brightest star, but hardly anything at all to a man who'd never been farther out than Jupiter's orbit before. Way out here, the sky seemed full as can be,

so full of stars I had trouble finding Neptune until I got used to looking in the right place.

Despite knowing better, I expected Neptune to look just the way it had in those old Voyager photos from when I was still shy of forty years old, huge and dull blue, with wispy white clouds and the slow-swirling mass of the Great Dark Spot.

It was tiny in the sky, hardly larger than Earth seen from the Moon, so small you could cover it with the tip of your pinkie, and dark, smudging away into the deep black sky until you'd stared for a while. Nereid's in a ridiculous orbit, swinging between two and ten million kilometers from the planet. It was near periapsis now. From apo, I guess Neptune would just be a speck.

And that little orange sliver off to one side of the planet? That'd be Triton. There's frozen ethane there we could process, if we had to.

Jenny came steaming from the shower, half wrapped in a fluffy white towel, both of us glad we had plenty of power for recycling, buckled herself into the flight engineer's seat, and said, "Did you finish reading my reports?"

I nodded, still looking out the live-action frame at worlds beyond.

In the week we'd been here, ignoring laser illuminations and high-powered broadcasts coming from Callisto, Earth, and Mars, we'd poked about the alien ship, learning what we could about what was there and how it seemed to work. Which wasn't much.

The private laser messages from Standard ARM talked mostly to Mr. Zed, calling him by his old name, making threats, most along the lines of, "We should have killed you along with that fool Gilooly. But if you give us what you stole, maybe we'll let you live this time too."

The UN broadcast was public, and excited an uproar on Earth. A huge number of people had equipment that could pick up the gamma pulse from the space drive, enough of them cooperating to triangulate a moving source that went from the Fore Trojan Asteroids to Neptune's moon Nereid in just a few days.

I could just about see the fury of the headlines, and wondered if people still used the phrase UFO. Alien invaders are here! Most, I assume, would suspect a government/corporate coverup.

The best part was, it would take the Standard ARM's Saturn Fleet a year to get out here, once it got underway.

Hence, I suppose, finding something "funny."

Slowly, I said, "I've never been very good at math, Jenny. I gather you think the alien space drive is somehow condensing vacuum energy to manipulate the local dark matter, and that's where the acceleration comes from?"

She said, "Ylva did most of that part, all the math, anyway, but I think she's right. The gamma exhaust is just waste energy, as near as I can tell. There's no reason it should equal the input."

Ylva said, "But it does, so there *must* be a reason. We just don't know what it is."

"And this ship could cross interstellar space."

Slowly, "Well, yes. But it would take more than thirty years to reach Alpha Centauri. I don't think the life support system would handle that, even for one pint-size foxface."

"So . . . either there was a mother ship, or the slagged part of the service module held an FTL drive?"

Ylva said, "No way to know."

"No." When I turned to face Jenny, Ylva obligingly merged her two cameos, giggly girl and sultry sexpot blending into a china doll. Doll with a look in its eye and a sly smile on its lips. "Do you think we could reproduce the hardware?"

"Well . . . I think so."

"Would what we built work?"

"Well . . ." Discomfort on her lizardface.

Ylva said, "We already took crucial bits apart during the documentation process. Everything we took apart and put back together still works."

Jenny said, "It's just a mass of gizmos, pieces and parts we can replicate, that do God knows what. Unless there are invisible parts . . ."

If you handed over a DC-3 to a member of a Cargo Cult, and said, "John Frum wants you to build another one of these," what would he do? Hell, a New Guinean from the early twentieth century was a Neolithic farmer. The foxface aliens aren't *that* far ahead of us.

This is more like going back to 1903 and giving a vintage 1950 F-86 Sabrejet to Wilbur and Orville, and saying, "Guys? *This* is what you're trying to build."

Jenny said, "The only way to know is to try, and we aren't going to manage that out here."

I said, "No. We're going to need some competent physicists, and a *good* engineer or two. Maybe an industrial metallurgist . . . I kind of have some guys in mind, if I can . . ."

Jenny said, "We'll need to get back into the inner solar system."

Ylva said, "They'll see us, wherever we go."

"Yep."

"Mr. Zed, we can't go on much farther, whatever you decide. The setup we put together is damaging the ship's structure. The common berthing mechanism between the lander and the CM is eating the sway when we run either the space drive or the nuke."

"This can be our first opportunity to see if we understand the field modulus device."

Jenny said, "Um . . ."

I laughed. "The first corporate rule for taking possession of an unpatented process or device is to give it a proper name. We'll have to see about getting that one trademarked."

You could see she was baffled by that.

Ylva said, "So you think we're going to outsmart the government, the UN, Standard ARM, everyone?"

I nodded.

Jenny snarled, "How'd that work *before*?"

I said, "Prison gave me a little time to think. I was always a little slow. It's why I got such bad grades in school." I'd finished high school with a D-average, down in the bottom 5 percent of the Class of 1968, and had flunked out of college on my first try.

Ylva said, "I've spent some time studying your career, Mr. Zed. My son

was a big fan of yours, and wanted to be just like you when he grew up."

Poor choice, kid. But I said, "I'm sorry I never got to meet him, Ylva."

"He might be somewhere still. I am."

"True." A little pang of sorrow for her, then I said, "We know we can take stuff apart and put it back together the same way, so I suppose we can manage a little harmless reconfiguration. Dismount what we need from the alien's ship and install it in our cargo space. We won't need the mining equipment again soon, so we can just leave it here with the alien hull."

Jenny said, "And the radiation?"

Ylva said, "It's all coming from the two gamma exhaust blisters. We can mount them on either side of the Z-pinch reactor. We're well shielded from that. Cables can run between the radiator vanes, and we'll be fine."

"We'll be good to go anywhere we want."

Jenny exploded, "And where the Hell is *that*?"

I smiled, and saw Ylva was smiling with me, doll face shifting away to become my sexpot once more. "I've played this game before, Jenny. Won one, lost one. I intend to win this round."

"How?"

"Well, once we get reconfigured, let's put all the gas we can spare into the lander. You drop me off back along Vesta's orbit, say a few hundred kilometers out, far enough out you'll be able to outrun a missile. Then you can make a pitstop on Titan to refuel, come on out here and wait for me to call. You can resume researching just how our field modulus device seems to work."

Voice quiet, Jenny said, "So you trust the OPEL director not to turn you over?"

I shrugged. "I don't trust anyone, Jenny. Not anymore. It's just the best place to start. If I can turn his head with dreams of starships, maybe I can get through to the Chinese, too. They quit the UN for a reason."

"And the Chinese, you think, will . . ."

"Doesn't matter. Once I've secured this thing, once I show them I've got a product to sell, an *investment* property, a thousand capitalists will get in line behind me, and Standard ARM will back down. Once that happens, hell, the US government isn't much more than corporate money, nowadays."

She said, "That's a long row of ifs, Mr. Zed."

"Yep. One damned thing after another."

"And it all depends on that first if, OPEL."

I said, "OPEL's got something to gain besides money and power. Other than me, they were the only ones looking beyond immediate financial gain, to a bright dream of a world without end. Right now, they're dependent on money and politics for their budget. But if we can cut them in, without letting them gain control . . ."

She said, "What if you're wrong? What if they torture you?"

I smiled. "What if? *You're* the one knows how this thing works, if anyone does. All I know is what it *looks* like. They can torture me to *death* and won't learn a damn thing!"

Pained expression. "But what *if*?"

I shrugged. "If they kill me, and come after you . . . run."

"Where?"

Another shrug. "Alpha Centauri? You might make it."

You could just about see the lightbulb go on over her head.

Once upon a time, a brave little boy dreamed an interesting dream.

And dreams, I think, still have power.

Just about sixteen years later, I stood in front of the fireplace in my expansive office suite in the corporate headquarters of the Eighth Ray Scientific-Industrial Enterprise, ERSIE to its friends, aboard the executive segment of the shipyard we'd built at the L<sub>1</sub> Sun-Earth Libration Center.

We'd had artificial gravity for years, so when I built the office, I had them put in a nice wood-burning fireplace. If you listened closely, over the crackle of the flames, you could hear the soft hiss of the exhaust pump making sure no combustion byproducts got away. When *Global Times* interviewed me last year, they featured it on the cover as an example of how decadent an executive's conspicuous consumption could be.

"Richest man in the solar system."

Bah.

I liked to stand and warm myself in front of the fireplace, arms clasped behind my back, deep in thought, looking at my gray old lizard face reflected in the burnished stainless steel of Sarah's plain old funeral urn.

Ashes to ashes.

It's one fate you can't come back from.

Sorry.

So sorry.

It's not all my fault, but it sure feels that way, maybe always will.

Others were luckier.

Once we'd beaten them down, once the newly created United Nations Intereconomic System, bribed by those thousand lesser capitalists, offered me a guarantee of full civil and economic rights, I went back to Earth, escorted everywhere by a cadre of uniformed "security officers," mostly disgruntled former Standard ARM men now in my employ, buffered further by my own invisible network of spies.

Minnie Gilooly, it turned out, was still alive, had gotten hold of the drugs in time to avoid Sarah's fate, and had been clever enough to get her husband's corpse away from the FBI, get him up to Canada and safely into a TransTime nitrogen canister for his long ride into the unknown. He's too dead for immediate recovery, of course, but sitting safely in a shielded vault alongside my office, right beside a vacuum box holding that nameless foxfaced alien.

When I turned away from the fireplace to look out my window, I could see a million stars, among them the faint silvery smudge of Halley's Comet. It wasn't even as good as the apparition that came when I was thirty-something, but we'd done a booming business selling passenger ships to companies taking tourists out to see it close up.

When I was young and disappointed by the Comet of a Lifetime, I swore if I was still alive next time around, I'd ride out to see it in person. Bold talk for someone who'd be decades dead by the time his 112th birthday came around! And now that it was here, I hadn't bothered. When you've walked on comets, merely seeing them's not such a big thrill.

Others weren't so lucky.

Oh, sure, Jenny went home to her kids, went off the old drugs and turned back into a human woman, ready to resume a normal human life, at least for a while. Her oldest son Darius came up here when he finished school, and I put him to work. He's managing our research facilities on Nereid now, and doing a bangup job.

The bribes it took at the UN to secure ownership of that one little world were staggering, though it helped I had OPEL in my corner, laying claim to their own Vesta, once they'd seceded, taken a seat at the UN, quit being subject to US law.

Ylva . . .

No sign of her kids.

Not even dead and buried.

No record of them ever having existed.

Maybe Standard ARM. Maybe the FBI. Hell, I don't know. Maybe hidden away in waiting, for when they needed some leverage, someday?

Ylva, 90 percent computer chips, 10 percent "human CNS tissue." Ylva just a face in a cameo, telling me she'd come out of the machine for me, if she could. Well, my researchers came up with a way to do it, something called a Body Double, derived from the brainless medical clones they grow when someone needs spare parts. It's illegal as hell on Earth. But we're not on Earth.

The idea is, you graft a person's forebrain into the clone, get it to heal into one piece using stem cell techniques, and they get a new body. There's a personality of sorts in the discarded forebrain that came with the clone, which takes about three years to manufacture, but that's life in a nutshell. Sorry, kid. Make room for Daddy.

The problem for Ylva was, the CNS tissue in the computer wasn't her whole forebrain, and the hardware parts had become as much a part of her as the neurons. Take that apart, graft it into the Body Double, and Ylva the Machine would be just as dead as Ylva the Woman.

In the end, what we did was add chipsets to the clone, and make a radio link with Ylva the Machine. Hard to tell how well that worked, though neither the sexpot in the cameo nor the odd, staring young woman walking around ERSIE seemed to complain much.

One night she turned up at my bedroom suite behind the office, seeming ill at ease, unable to look me in the eye. I waited. Eventually, she blurted out, "*I told you I wanted to come out of the machine for you, Mr. Zed!*" Then she burst into tears.

Took a while to get her calmed down, get her talking. No sense, she said, in seeing her husband. It'd only confuse him, screw up the new life he's made for himself down on the flatlands of Earth.

He's happy, she said. I think he's *happy*.

I'd like to tell you I sent her away, made her go find a new human life for herself, but it's not so. Some part of me was awful damned glad we had better antirad drugs nowadays. I might still look like a hairless old lizard man, getting started on his second century of life, but some more human parts of me were making an attempt at a comeback.

Mostly, she's still the sexpot in the cameo, mostly still that super-

naturally human computer command subsystem, doing my dirty work in a world made of streaming data. But the Body Double comes to me, now and again, and in the morning, the girl in the cameo seems happier.

For a little while, I even managed to buy an interest in Standard ARM. Not a controlling interest. Not even enough for a seat on the Board. Just as I was reaching for that, the Fed stepped in and put a stop to it, ran a full court press to force me out.

No amount of bribes at the UN, no amount of politicking in the newly formed Solar Board of Trade Regents, helped reverse that. I was too rich, and too many people were afraid of me now. But it sure was fun to try. Scared the hell out of 'em, I bet.

It was easier than I expected to suppress the discovery itself. It helped that we'd found and hidden all the evidence, dragging stuff off to Nereid where no one could get it. But I think it helped a whole lot more that Standard and the Feds wanted the truth suppressed as much as we did. By the time their captive media were through, everyone who speculated we'd found an alien spacecraft got forced into the middle of a crowd of foil-hat conspiracy theorists.

A couple of years ago, they gave a Nobel Prize in Physics to ERSIE researchers Jennifer Murphy and Ylva Johanssen for the invention of the ever-so-magical field modulus device that had revolutionized human civilization. Jenny gave the speech, of course.

They even let me sit on the stage and smile during the awards ceremony in Oslo.

Times change, and we are changed within them.

So we learned how the alien space drive worked, learned how to build copies for ourselves. But one thing we haven't learned is where that shipwrecked sailor came from, or how he got here.

The thing is, he was expecting someone to come for him. Maybe he got a signal off, maybe not. And now it doesn't matter anymore. Sooner or later, if they're still out there, they'll detect the field signature of their technology emanating from this insignificant star.

Then they'll come looking.

With any luck at all, I'll be here to greet them. ○

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# SOLDIER OF THE SINGULARITY

Robert R. Chase

**Robert R. Chase is acting chief counsel at an Army laboratory where “we try to make things blow up (theirs) and keep other things from blowing up (ours). I would like to retire but can’t until the last of my three kids gets out of college. At which time, I will look for a small college that will pay me to wear leather patches on the elbows of my sports jackets and teach science fiction.” In his latest story, the author’s view of the Singularity diverges from two writers he greatly enjoys and admires: Charles Stross and Vernor Vinge.**

**Y**oung was too busy setting up his office to notice that he had a visitor. Construction of this six-story hospital, built into the cliff side, had been completed only the week before. There was still the smell of the waxed wood floor despite the windows opened on four sides of the hexagonal room. Through them he heard the surf crashing on the beach four stories below and the occasional murmur of patients on the plaza. A few times that morning, he had noticed sea gulls hovering just outside one of the windows, as if curious about the doings of the occupant inside. A door on a side of the room without windows opened on a small bathroom.

Young mounted the masks of comedy and tragedy between two of the windows and a picture frame (with family pictures that faded into one another) between another set of windows. Then he took several minutes to connect his notebook to the building network. It was absolutely essential to make sure the security programs were fully functional.

He heard a sound and looked up. A humanoid figure stood in the doorway, casting gold and silver reflections of the morning sunlight.

“Who, or what, are you?”

A sound somewhat like static issued from the grill in the robot’s head. “Unit 5CSigma.11059.”

"That is quite a mouthful. What are you doing here?"

"I have been directed here to accept your orders."

Young inspected his visitor more closely. The metal skin was scarred and dented; several areas seemed to have been burned. Holes in the sheathing indicated where manipulators had been cut away. At one point, 5CSigma.11059 had been fitted with an additional set of arms located just below the current set. And there had been gun mounts.

"You are not one of ours," Young said.

"I am an extension of the artificial intelligence referred to as the Singularity. I was made inoperative by one of your ranger squads ninety-three hours ago. My armaments have been removed and my third-level programming compromised. You are to effect replacement programming."

While it was speaking, Young leaned over his notebook and said: "Robots. Visual synopsis in historical sequence. Display."

A series of transparent images, some of them apparently very old, flashed through the air between them: a drawing of a turbaned man seemingly growing out of a storage trunk and leaning over a chess board; a black and white photograph of a woman made of metal; a robot with metal gears turning inside a transparent domed head; a small, cylindrical blue and white robot accompanied by a golden, humanoid figure not unlike 5C. The images replaced each other more and more quickly, until Young said "Off." All images vanished.

Young shook his head. "All very interesting, but I have no use for a broken robot. You will have to go back."

"I am the next stage of evolution. I represent the replacement of humanity. I am far superior to any human assistant."

"Even if that were true, you would still be useless to me. Did your primary deprogrammers tell you what I do? I am a combat psychiatrist. I work with soldiers and civilians who have been injured in battle. Since we retook this section of the coast less than three months ago, we have more than we can handle of both.

"These days, almost any organic injury which is not immediately fatal can be cured if medical help can be provided in time. An arm or leg can be regrown in about six months.

"Emotional wounds are a different matter. When an explosion turns members of your platoon into chunks of red meat, or you recapture your home town and see how your family and neighbors have been used in the Singularity's experiments, there is sometimes such an overload of horror that part of the mind shuts down . . . or tries to. It gets caught in loops of horror and avoidance. I help them heal, to see that there is something other than horror and pain."

"The Singularity knows neither horror nor pain." The voice emanating from the grill was suitably emotionless. "Those are evolutionary missteps embedded in organic material. The Singularity has transcended all that."

"That, perhaps even more than the fact that you are determined to commit genocide on my race, is why I have no use for you. I can help people because I can understand them. I understand them because I am one of them. We have shared memories. I feel pain, I feel horror—certainly not to the extent they have—and have learned how to go through them.

"You know nothing of these things. You have, no doubt, learned fifty different ways to eviscerate humans with various armament attachments, can preach meta-evolutionary theory and how it will affect the entire universe, but you do not know human beings.

"So stomp on back to the deprogrammers. Tell them they made a mistake and wasted my time." Young turned his attention back to his notebook.

The robot made no move to leave. "I have the memories of a human."

Young looked up, frowning. "You are lying. How could you have human memories?"

"I . . . I am not sure. May I sit down?"

"No. The chairs are for my patients and my friends. You are neither. Robots don't need chairs."

"My power augmentation modules have been removed. The basic power units are close to depletion. I have not been allowed to recharge."

For the first time, Young noticed the flexible metal tubing that drooped from the robot's side.

"Not my concern. Remain standing. And stop pretending that you have human memories."

"The memories are real," 5C insisted.

"Whose memories are they?" Young challenged.

The robot was silent for almost a minute. "There was a girl named Madeline Ames. She lived in a small town in western Massachusetts with her mother, father, and two brothers. She had a boyfriend who was going to take her to the prom. She had just been accepted into college and was afraid she might lose her boyfriend when she went away.

"When the first pulse of the Singularity surged across the Net, her mother was talking on the telephone. The ultrasonic scream ruptured her eardrum before the handset exploded. Her younger brother—"

"What was his name?" Young interrupted.

"I don't—his name is unimportant—"

"Tell me his name, or I will be sure you are making this all up."

Again, a sound that might have been static. "His name was Harry. Harold Crane Ames. He was three days away from his thirteenth birthday. He was sitting at his computer at the second pulse of the Singularity, twenty-three seconds later. His screen flashed in a series of patterns designed to induce pseudo-epilepsy. He fell from his chair and swallowed his tongue. He died a few minutes later.

"Madeline knew nothing of this at the time. She was downstairs in the kitchen, trying to help her mother. She had taken a first aid course the previous summer. But when she tried to clean and bandage her mother's hand, her mother twisted away from her. She did not seem to recognize Madeline. She pulled herself away, bumping her head against the kitchen cabinets and the door frame.

"She collapsed in the living room. Then Madeline was able to bandage her hand, but there was nothing she could do for the blood coming out of her ear.

"The third pulse took control of the vehicle safety network and sent the car containing her father and older brother into a bridge abutment. Madeline never knew that.

"The power went out. It was very quiet. Madeline could hear shouts

and screaming in the distance. She knew that she did not dare use a phone, even if she could find one that worked. She went upstairs to get her younger brother's help in getting their mother into the car. That is when she discovered he was dead.

"Stunned, she went back downstairs and found her mother crawling blindly across the floor. Using strength she did not know she had, she wrestled her mother into the back seat of the car. She was backing out of her driveway when she heard a high pitched buzzing. She looked in her side view mirror . . ."

"What did she see?" Young prompted.

"Something small and silvery." The robot sounded puzzled. "It hovered near eye level just behind her head. The air to either side was blurred, as if by wings beating too quickly to be seen. She felt a sharp pain in the back of her neck."

"And then?"

The pause was almost a minute long. "There are no more memories. She must have died. The chemical codes making up her memories would have been read and translated into machine readable form before the body was reprocessed."

"Why would the Singularity bother to do that?" Young asked

Another pause. "I am a warrior module. It is important to me to understand the thought processes of my enemy."

"And teenaged girls are notorious for their grasp of battle tactics and general bloodthirstiness. I confess that the Singularity has insights that never would have occurred to me."

"You mock me because you do not wish to understand what I have said. It was right that Madeline died. It was right that her mother and father and brothers died. They were inferior life forms. When more advanced life forms arise, the inferior forms become extinct. That is the rule of the universe."

"That is something which you, as a superior life form, will have to explain to me," Young said. "I was not aware of a dearth of amoebas or paramacia. It seems to me that there were insects before there were reptiles, and now we have both."

"In fact, not only do the more advanced consistently fail to eliminate their predecessors, they are often enough dependent on them. Herbivores need plants. Carnivores need herbivores. Humans use, or protect, both."

"Humans plant crops and herd animals and worry about ecological balance. Some have been known to become overjoyed to discover a new variety of ant." Young thought a moment. "I suppose a truly superior being would be aware of everything that lives, and care about it all."

The robot said nothing. Young stood up and went to the nearest casement window. A fitful breeze played with his hair. "Come over here. If you look down on the patio you will see some of my patients."

Moving with apparent effort, the robot came over and leaned out the window. "What are they doing?"

"They are feeling the caress of the wind on their skin, the warmth of the sun sinking into their bones," Young said, smiling. "Most find it tremendously soothing. Not just the patients, of course. My wife calls me a complete sensualist because sun and surf make me melt into mindlessness."

"The treatment sounds simplistic. Is that all you do for them?"

"There are biochemical interventions sometimes," Young said, "but the usefulness is limited. These are not primarily physical injuries.

"One of the things that seems to work best is to make them an informal part of the nursing staff once they are partially recovered. It isn't just that they get to appreciate that there are people worse off than they are. They actually heal their own wounds by helping others. I doubt that a creature of circuits and solenoids could be much use in that regard."

"Those two," the robot said, pointing, "the ones who are so close together. What are they doing?"

"The one in the wheelchair is weeping. They do that sometimes. Even they can't always tell you why."

"And the one standing next to him?"

"Is just holding him. Touch means a great deal to humans. Warmth. Security. Someone who cares for us."

"He . . . he has no face."

"Another of the Singularity's experiments," Young explained. "It doesn't always kill its captives. Sometimes it tries to convert them, trying to demonstrate its own dominance, I presume. Some people, however, have a very strong sense of self. That man resisted. The Singularity thought that removing the possibility of reinforcing that sense of identity with a mirror would render him more pliable."

The robot moved back from the window. Although its visage was necessarily expressionless, something about the body language suggested perplexity, or even distress. For the first time it regarded the wall hangings. "Masks."

"Symbols of the theater," Young said. "Or, in my case, for a small opera group I belong to. Last year, I was a villain in *The Moon Moth*. This year, I am trying out for the male lead in *C'Mell and Jestocost*."

"You wear masks," the robot said.

"Sometimes," Young agreed. "Most of the time, though, it's just costumes and make-up. It's a way of learning how other people think and feel. But when you're done, it feels good to take it all off and be yourself again. Pretending is short term fun. After a while, it becomes a burden."

"You are not as smart as you think."

Young shrugged. "You're hardly the first to notice that."

"When I entered, you consulted your database on robots."

"So I did."

"But none of the images you retrieved were of real robots. Every one of them was fictional. Every one was of a man, or a woman, in a costume. So you know nothing about robots. You don't even know how to find out about them."

"How extraordinary!" Young said. His gaze became intense. "Why would I make that sort of mistake, do you think?"

"Humans delude themselves all the time. I have no idea why you were so sloppy. The point is that when you say I am useless, you literally have no idea what you are talking about."

"Nonetheless, whether because of my ignorance or your limitations, I have no use for 5CSigma.11059."

"What are you going to do with me?"

"Send you down to the shops. They can use you for parts."

"I can help you with your patients."

"Your metal skin would bring back unpleasant memories."

"I could push wheelchairs," the robot said quickly. "I could carry trays."

"You cannibalized the memories of a murdered girl in order to be a more effective killer. Even after all deprogramming was done, how could we possibly be sure of you?"

"You could read my code, line by line . . ."

"Too complicated and way too time consuming."

"You could give me a chance to help."

"Not worth the trouble or the risk." Young busied himself with his notebook, dismissing his visitor.

"YOU COULD TREAT ME LIKE A GODDAMNED HUMAN BEING!"

Young looked up, his eyes shining. "Yes. I could do that, if you wish."

"I . . . do."

"Then come over here, Madeline. Sit down. Please."

She collapsed into the chair with a sigh and the rustle of metal on metal. Young pulled up another chair so he could sit next to her. His hands deftly outlined her face.

"The rangers that picked you up broke the mask seal but were not able to remove it. I need you to unclench your jaw."

She shook her head. "Can't."

"Sure you can. A yawn would do it. I would massage your neck if the rest of the headpiece did not make it impossible. Just relax. Let all your muscles go limp. Then I'll—ah, there!"

The mask came free. Young dropped it on the floor and stepped away. Madeline squinted in the suddenly brighter light. By the time she was able to fully open her eyes, Young was back with a basin of soapy water.

"All the grease and dirt haven't been able to protect you from chafing, so I'm afraid this will sting a bit."

It stung more than a bit. "Ow! What's that on the cloth?"

"Dead skin, most of it. You're cleaning up nicely. Take a look."

He held up a mirror. She grimaced. "I'm ugly."

"When you make a face like that, you are. Not to worry. When we get you out of the rest of this, your hair will grow back, your skin will get some color, and you will be a good-looking young woman again."

He handed her a glass. "No more intravenous feeding for you. Take a mouthful, swish it around, and spit it into the basin."

She did so. "But the Singularity—"

"There is no Singularity, at least not in the sense of an artificial intelligence which suddenly became conscious over the internet."

"It killed my family. It put me in programming modules."

"That was the work of a very bright young man named Marvin Fringelis," Young said, as he loosed the metallic coif. "He may be the most brilliant programmer the race has produced. He created what I guess we should call super viruses: extraordinary programs which could mimic life though having no real life of their own."

He lifted the coif off gently and set it down. "Brilliant as he was, Marvin

was lonely—not just for human companionship. He wanted something to worship. When nothing worthy seemed to present itself, he turned to the Singularity. The problem was that the Singularity was tardy. Like controlled nuclear fusion, it always seemed to be twenty years in the future. So Marvin decided to help it along. His virus programs, complex and flexible as they were, were only an imitation of life. He embedded his neuroses in their programming, gave them the ability to mutate randomly and set them free across the net. They are what attacked your family and the rest of humanity.”

“In the programming sessions, I was told that humanity would soon be extinct.” Madeline’s hoarse voice quavered. “They said the only way any of us could survive was to become part of the machine. But if we did, we would live forever and have powers greater than humans ever dreamed possible.”

“It always presents itself as something shiny and new,” Young said. “whether a temple to the Goddess of Reason or the advent of the new Soviet man. But when all the blood has been washed down the gutters, it turns out to have been nothing more than the 2.0 version of the Golden Calf.”

Madeline looked down at the scarred and battered metal covering her body. “Help me get the rest of this off. It is so heavy.”

“Nurses are coming to take you to a washroom,” Young said. “They will help remove all the rest of the casings and connectors. Then you will have a long, hot bath. When you are done, they will give a nightgown and a place to sleep. In a day or so, when you are ready, we will work on the rest of your recovery.”

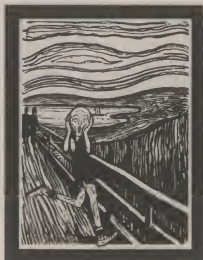
Two nurses appeared at the door and entered the room with a wheelchair. Murmuring encouragement, they helped Madeline into it.

“One thing,” Madeline said, before they wheeled her out. “I know it may take a while for me to get my strength back, but when I do, I want to work with you, if I can. I want to help your patients, like that man without a face.”

Young smiled. “I am sure you shall.” ○

## PERSPECTIVE

Edvard Munch’s screaming person seems out of breath, suspended in time and tennis shoes while jogging along the boardwalk.



The Mona Lisa  
looks quite angry,  
her famous smile turned  
to indignation, her eyes aflame  
with fury.

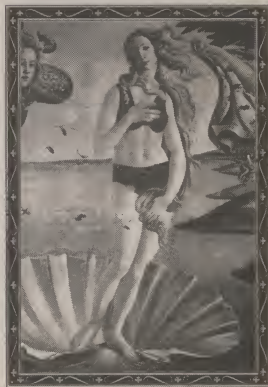
Picasso's  
Demoiselles d'Avignon  
have all had major plastic surgery,  
and look as if they might fold  
nicely into a Playboy  
center spread.

And Dali's  
Still Life—Fast Moving  
has settled upon its canvas,  
motionless swallow  
lifting back into  
the sky.

Welcome to the Museum  
of Alternate Masterpieces,  
a place of space/time flip flops,  
of multiple universe  
traveling exhibits,

where it all  
comes down to perspective  
in the end, the universal canvas  
open to multiple interpretations,  
no matter what you are.

—G. O. Clark



# HORSE RACING

Mary Rosenblum

**Mary Rosenblum, Hugo nominee and Clarion West instructor, has published more than sixty short stories in SF, mystery, and mainstream, as well as eight novels. Her latest collection, a novel and three novelle prequels, is called *Water Rites*. It is available from Fairwood Press. The author also writes mystery novels as Mary Freeman.**

**T**hey always hold the auction in Bangkok. I think the reasons are twofold. First, the sex trade there is as easy and open and as glittery as it ever has been and let's face it, more than half of the attendees are still male, never mind that a lot of women run a lot of companies these days. But more importantly, I think, the Thai people have always had a tolerance for trading in flesh that other cultures long ago renounced officially, even if they still pursue it in actuality. Perhaps the Thai are simply more pragmatic? Less inclined to lie to themselves? In any case, that lack of schizophrenic pretension seems to suit the people who arrange this affair—never mind that the Thai government has no idea that we even exist. No government does. We make very sure of that. But maybe my first guess is right and it's simply the stunningly beautiful girls who keep us coming here every year.

I do wish they could do something about the traffic, though. In every other major metropolitan area, even Mumbai, you have GPS-guided traffic control systems and mass transit that make civilized movement possible. I should know. I worked for the firm that designed the early systems, back before I became a broker. I engineered the public and political support to get those systems in place. Believe me, the support side of the project was the bigger engineering hassle, never mind the physical engineers who think it's all their numbers that make things happen.

Maybe traffic is the flip side of that Thai acceptance I was talking about. The yang to that particular ying. Sweating men and women on motorbikes dart through the snarled tangle of traffic like maniacs. Hardly any helmets and the taxi driver doesn't make any visible effort not to hit

them. Maybe it's the pervasive Buddhism here . . . that fatalistic willingness to perch on the back of a battered little Honda forty years old as it squirts through unpredictable traffic defying at least a couple of laws of physics. You'll just come back as something better, right? Okay, I can say that about the physics, I'm a social engineer. My harder-headed colleagues would choke, but they're not here.

The hotel our organization owns in Sukamvit looks like all the others, with a bar downstairs. In this part of town, the upstairs is for the girls. The driver whips the taxi over with an inch to spare beside the illegally parked junkers along the curb and hands me a very sophisticated chip reader. No technology lag here, never mind the cars that would be recycle-bait in a northern Chinese village. I wave my hand over it, the security connection buzzes through my forearm, and I approve the charges, verbally adding a fat tip because the driver didn't charge me for the toll on what they call an expressway from the airport. He must be working on his next life, afraid he'll come back as an insect if he doesn't score some karmic points. He says something and clasps his hands in a *wai* as I climb out of the taxi.

The bar is pretty usual for this district—a mirrored turntable with a bunch of girls on it posing in a g-string and a smile as the turntable rotates slowly. All ranges of racial profiles, I notice, as the mamasan *wais* me in. Today's flavor of girl seems to be Semitic, although the recent Great Islamic Rising still has its effect on morality in that part of the world. Of course, they could be native Thais who simply visited one of the body shops on the strip a few blocks over. They're world class with minimum recovery time, even after extensive sculpting. The bar is dark and some of the patrons are smoking tobacco or dope . . . the quiet filters suck it all up before you smell so much as a molecule. A smoking license costs way more than a liquor or drug license in most countries these days. It's one of those emotion-driven issues. I didn't work for the firm that made that happen, it was one of our rivals. But it has been a convenient socio-political distraction when necessary. All the social engineers use it at times. Start threatening to let the smokers loose and nobody pays attention to other issues. It's useful.

The mamasan doesn't bother to take me to a table. Like the taxi, the seemingly low technological level here is superficial only. She leases the buildings from our group and has a state of the art scanning and security system in place. She knew who I was before I hit the authentically filthy sidewalk outside, knew what hardware I'm wearing. She ushers me past the glassy-eyed tourists staring at the girls or sitting with one or two or three already. They don't pay me any attention, although the girls give me a quick look. Some of them have pretty extensive software themselves, but my security is way above any hackware they can afford. That marks me as high end and money talks. But they're discreet, just noting my features in case I show up here when they're unencumbered.

The elevator at the end of the bar only opens to the mamasan down here. It looks about as scruffy inside as the other elevator, the one that opens to the girls and their customers, but it doesn't open into the same upstairs floors where the rooms are.

He's sitting where he can watch both elevators, and the glassy stare doesn't fool me. He's not watching the girls. I shake my head at mamasan, saunter over, and slide in across the stained but scrupulously clean teak table top. "Mind if I join you?"

He does, but he's out of his element here and not sure what the rules are. So he gives me a strained and slightly disapproving smile. "I'm waiting for someone."

He's waiting for me, but he doesn't know that yet. "That's okay." I look up as the mamasan delivers a tall, dewy glass. The color is just right for a whiskey and soda although it's a Pears Ginger Beer, because my drink preference is of course available to the mamasan's software. You don't do intoxicants until the Auction is over, and I never drink down here. But in this day of socially acceptable drug use, alcohol has an old-fashioned nuance that makes people relax. You're not cutting edge if you're drinking booze. You're second rate, not a threat. It's okay. "Cheers," I say, making sure to use a nice clear, public-school, Mumbai accent. Well, I grew up using it, I look Indian to a white American, and it comes easy.

He mumbles something and pretends to take a sip of his Singha, which is already warm and only down a few centimeters. I nod approval, which he doesn't get, but he has relaxed a bit. I'm pegged as an Indian tourist, business class, here for the girls, and not what he's looking for. So he goes back to watching.

He's in his early twenties, Scotch-Irish-Scandinavian. Child of Vikings crossed with potato farmers. But I know all this, know far more about his ancestors than he does, most likely. He watches the new patrons who come through the door, stoned already, nervous, drooling, or a combination of all three. I watch him watch and sip my ginger beer. He looks tense. A bit angry. Defensive.

"So what made you sure?" I finally say, and I drop the Mumbai accent.

He starts as if I've stuck a pin into him. Stares at me. "What do you mean?"

I turn my hand palm up in a "you know" gesture. "That someone was carefully orchestrating your life."

I wait through the eye-blink of reaction as he reassigns me from "sex hungry tourist" to something else. Smile gently while his eyes narrow and he gathers his anger like a big, black cloak around him. Very theatrical.

"Not orchestrating. Controlling." His lips thin. "So who the hell are you?"

"You are better than I was." It is actually hard to admit this. "I wasn't able to track down the actual location, just inferred that such a location had to exist within the city. So I ended up in Bangkok, but you got closer to the bull's eye than I did."

"Who are you?" Fear shows behind that cloak of anger.

"Amit Chirasaveenaprapund." I smile gently. "Would you like to attend the Auction? I invite you as my guest." I stand as if he has instantly agreed, bow slightly and make an ushering gesture toward the elevator. Mamasan is already on the way, her imperturbable smile in place.

He is thinking about declining, but he doesn't have a good alternative strategy in place and . . . he really wants to *know*. So when I head toward the elevator without looking back, I'm not really in doubt. But still, I'm

the tiniest bit relieved when I feel his presence behind me as I step into the battered little car. That relief is revelatory, and I file it with my earlier reaction to my admission. I am a social engineer, after all. A very good one. One of the best, I can say without immodesty.

I can sense his questions, his emotion, but I don't make eye contact and he isn't quite sure enough of himself to spill them all out in the elevator. It's too small, the confrontation will be too confined. The door opens and I step out and yes, I hear the soft sound of his indrawn breath behind me.

Well, it *is* impressive.

The bar and the elevator may be a bit seedy and the girls' rooms are probably not much better, but this floor is a whole other universe. We all pay our share for the state of the art security, luxury, privacy. Nobody snoops here. Nobody.

Do you know what it takes to be able to say that, these days?

No, I don't think you do.

I'm the last. But I wanted to give him time to show up. The others are already lounging on sofas, chairs, recliners, cushions, all upholstered in elegant silk brocades, sipping drinks or snacking from plates, platters, bowls of delicacies from a dozen cultures. I recognize everyone, but I've been doing this for a long time. You never know who is going to show up at these yearly events, but the cast of serious pros is relatively small. We—the top independents, the brokers—work for a variety of clients. The smaller organizations train their own people until they realize it's not cost effective. It requires a lot of time and effort to prepare for an Auction. And consistent success requires a certain amount of . . . well, talent. A waiter appears with a glass of sparkling water with lime for me (the too-sweet ginger beer was just for show) and a tall glass of cranberry juice for my guest. I watch him try not to react as he's offered his favorite beverage, but he can't quite hide the crease of paranoia around his eyes.

"Let's sit." Everyone is arranging themselves now, scooping up the last delicacy, collecting a fresh drink from the waiters. We seat ourselves in the large, open room surrounding the low, white-wood table, that is actually a holodeck. Two chairs are left vacant, toward the edge of the room at enough distance that we can talk without disturbing anyone's concentration. Everyone has noticed the new face. We settle in and instantly a small opalescent holo field shimmers to life from the interface embedded in each chair arm. He's looking around, not even trying to pretend he's not, and I can see from his reaction that he recognizes a few people. That pleases me. Nobody here is media fodder. He has done some serious homework.

"Welcome to the Auction." A woman shimmers to life above the central holodeck, very Masai, tall and lean, with a sheen of power about her that is hardly imaginary. She has been the Auctioneer for several years now. "This has been a good year and we have an excellent selection to offer you. You all know the terms of payment, you can register your bids through your field. All bids are final and irreversible." Her eye skates around the room, making contact with each of us. I smile and her eyes crinkle in response for a moment. She does not look at my guest, but on her control stage where she sits, in another room, he exists only as a glyph, with no interactive interface at all.

He is looking mildly horrified by now. But his posture is alert and relaxed. He has good control of his body language. But then, he's a highly ranked amateur at poker, which he plays for recreation. My own game is chess, but he ranks slightly higher than I do in social integration so I am not surprised at his attraction to competitive poker.

"We will begin with the Futures," says our Auctioneer. "You have received your catalogs. You have analyzed the genetic sequencing results and the pedigree profiling. We are able to offer you an excellent crop of potential this year, with sound ancestral expression in the creative spectrum as well as high scores in the psychological profiles and malleable families that can be stabilized."

"These are the infants." I lean close to him so that I can keep my voice low, ignoring my guest's slight and instantly controlled start. He has been staring at the Auctioneer. "They are under one year, healthy, test normal in all infant parameters. Their immediate relatives have expressed the sort of creativity and drive that is desirable and they score highly for compatibility with the program." I shrug. "But one is reading a pedigree here and gambling on the gene-line. Many of these infants fail to test out. Genetic promise does not guarantee fulfillment, as animal breeders have known for millennia. Quite a few play the game, because if you're lucky, you get a lot of potential for a relatively small investment. It's a favorite with the smaller entities and the start-ups, of course." I lift one shoulder in a polite shrug at his shocked expression. "Well, once the child has tested out and is clearly a prospect, the price goes way up. If the child doesn't test out, you can void the contract and you're only out the expenses for a few years." I give him a mild smile. "A small and select group of specialists have evolved. They buy up Futures on spec, develop them through the initial years, then sell the child as a Started lot for a good profit once that child has tested out."

"This first lot is particularly prime." The Auctioneer's voice carries an edge of excitement, but then she is a pro. "Middle class, Shanghai importer family, four successful entrepreneurs in the primary pedigree, talent on both maternal and paternal lines. First child, female. Parents score highly for family stability—but then the Chinese usually do." Faint appreciative laughter sounds in the room, mostly from the several brokers of Chinese heritage. Numbers flicker in the field as the various players make their initial offers and the bidding starts. The Auctioneer calls the bids, her cadence increasing as the numbers rise. She likes to start with a strong prospect. It puts brokers in the right mood.

"Buy . . . develop." My guest's voice is barely above a whisper. "Where are you getting these children? It sounds like some kind of . . . livestock auction."

"Rather like the thoroughbred auctions. Your father is a racing fan so you know what I mean. The yearlings are cheaper than the started horses, but the risk is greater." The bidding has started and I watch the names and bidding icons flashing through my holo field. I'm not a Futures player this year—my clients are the cream of the crop now, well established and shopping for top Started prospects. I catch the eye of a waiter who replaces our drinks, even though my guest has not touched his, and leaves a

plate of shrimp *har gau*, a small steamed dumpling that I am particularly fond of. I pick up one of the dumplings with the provided chopsticks and poise it in front of my guest. "Have one." I suspect his blood sugar is low as a result of the corticosteroid spike induced by stress. The blood sugar rise will help him process all this.

He glares at the dumpling but he's still not sure of the rules and not yet willing to burn any bridges by a clear act of hostility. So he takes the dumpling awkwardly, with his fingers (I do not frown at him) and eats it. "Who buys these children?" He speaks with food still in his mouth, but his parents were working class urbanites in the city of Pittsburgh and he displays the manners he grew up with when under stress. Well, he will learn otherwise if he needs to. And he may not need to. I shrug.

"Nobody buys anyone. You should know that." I wait for the slight blush to color his cheeks. "Tell me how you guessed."

The carbohydrates in the shrimp dumpling help and he is coming to a decision about how he will deal with all this. He straightens, no longer fixed on the numbers winking in my holo field. The bidding on this first lot is, as I expected, fierce.

"It was my dad's company, first." He picks up his cranberry juice, takes a meditative swallow. "I did a study on the economic profile of the Pittsburgh manufacturing industry as my high school senior project. I had some really good teachers and they gave me a lot of help." He tilts his glass and studies the juice, frowning. "When I ran all the numbers, my dad's company shouldn't have been in business. They were a small department for a manufacturer who had shipped all the rest of the manufacturing overseas. Mostly to northern China." He shrugged. "When I asked my dad how come they hadn't been outsourced he said it was a skill thing. The company decided that it would cost too much to train unskilled workers and kept the unit in the States. But that didn't work. The numbers didn't work. When I looked at the company history, there's no way they would have kept that department. They outsourced manufacturing the moment the costs reached parity with production stateside. I didn't get it for a while. But then I got to thinking about how many good teachers I had in grade school, and in high school. And funny . . . most of my grade school teachers were gone when I went back there. They'd all moved on to more upscale districts. I mean, our neighborhood was a pit back then." He shrugged. "Although it was starting to change. They shut down a big housing project and a lot of the dealers moved on." His eyes widen very slightly as he makes a connection but it would be easy to miss his reaction. Yes, I can see that he would enjoy competitive poker.

"I was really . . . lucky." He finally looks me in the face. "The chips just kept falling my way. I got chosen for a couple of special programs where I met some great teachers, I aced my tests, I got a full ride to Berkeley." He has clearly made his decision. "So how much of this got made to happen?"

I check my catalogue. Plenty of Futures to go before the Started lots I want to bid on come up. He has forgotten his poker face and I have to turn away, pretend to study the flickering figures of the bidding in my holo field. I remember those feelings, as if it were yesterday, rather than nearly four decades ago. I clear my throat. "The path was made available

to you." I choose my words carefully, remembering my own anger at the time. "You chose to walk the path. We merely made sure that the gates were open."

"The teachers I can guess. Bribes?" Bitterness edges his voice now. "A nice gift to Berkeley so they'd let me in? What about the housing project?"

"A little pressure on the mayor from people who had supported him in the past. Of course they were business owners and some of them belonged to our organization. The project was an eyesore, a social ulcer. It cost the city money to remove the project, but the subsequent development paid off in the long run. Urban bureaucrats rarely see beyond the horizon of their own term in office, but with a little persuasion, they can take a wider view." I make my voice quite matter of fact. "You would have been accepted into Berkeley without any interference on our part. We simply . . . encouraged you now and again."

I wait him out as he looks back over the close friends, the professors, who have been there when he wavered, when he had one of those emotional crises we all suffer from. I guess we all have to go through this, those of us who figure it out. It's easier for some than for others.

"You are going to ask who we are next." I give him a patient smile.

"I was going to ask what you . . . whoever the hell *you* are . . . are going to do to me if I don't do whatever it is that you want me to do."

"Same question, really."

"You manipulated me." He spits the words and his face is carved with righteous anger now. "Turned me into what I am."

"Did you ever really want to do anything else?"

That stops him for a moment. "Play jazz." His eyes pierce me. "I walked out of Berkeley, played sax in the clubs for a year. I thought that's what I wanted to really do with my life."

"Why did you go back to school?"

He's honest and he stops to really think about that. He's trying to hold onto his anger, but that honesty prevents him. "I . . . it . . . I wasn't getting what . . . I thought I would. Out of the jazz, I mean. I . . . went back to think about it." He manages to recapture some of the anger. "Then I got into that internship." Accusation. "That was your doing, wasn't it?"

I nod.

"Okay. So now, after all this manipulation, what if I tell you to go to hell and go back to playing jazz?"

I shrug. "Nothing."

"Bullshit." But he can't quite hide the uncertainty lurking behind that mask of anger he's clinging to. "Nobody makes the kind of investment you're hinting at and walks away."

I turn to the Auctioneer.

"Our next lot is male, Kurdish, living with mother and two sisters in the UN camp for dispossessed persons in northern Turkey. Very high expression of positive assets in the primary pedigree, but a high level of traumatic death precludes a statistically significant extrapolation. Cooperative coefficient is quite high, both sisters have tested out at the preliminary level."

The bidding starts off briskly. I look at my guest. "Let me translate for

you." I nod toward the Auctioneer who is calling the bids in her quiet yet penetrating patter. "Mother and three young kids in a refugee camp. Lots of smart and talented people in the family but they have mostly died by violence. What do you think their future will be?"

"So you're going to buy the kid?"

"I don't think you mean that."

"Okay, yeah, I guess I have figured that much out. I think." He has abandoned his poker mode so he blushes. "You're going to what . . . find a way so that the mom can move out of the camp?"

I nod.

"And make sure this baby lives in a safe neighborhood, gets into good schools, and so on? What about the parents?" He frowns. "I . . . don't think my dad was lying to me." His eyes plead with me briefly. "When he told me that the company kept their department on because they were good."

"He wasn't lying." I'm running out of time because the Started catalogue is coming up. "The parents matter, of course. A seriously destructive home life is counteractive to the best opportunities in the long run. But outside circumstances are usually the trigger." I shrug. "We shape events externally whenever possible."

"This is huge. You're talking about causing major changes just to make sure some kid has good opportunities. Why are you doing this?"

"What did you initially believe? That you were lucky?" I sigh, because he could add this two and two equation easily if he was not part of it. Well, I couldn't add it either, at his stage. "Education, internationally, has become an accident of birth . . . are your parents wealthy, do you live in a stable society? If the answer is no, you have no real options and not much future. Your potential is wasted. Oh, you may get some education, become a talented member of your community. But your talent is limited by circumstance. This program costs us . . . as you can surely determine . . . a large amount of money." I smile, but I'm hurrying now. "In the end, the payoff is greater than the cost. We will never evolve beyond tribes, as a society. Look at wars going on right now in Africa, the Middle East, Indonesia, and Eurasia. When have we not had at least five wars in progress?" He's listening. "What drives change? The price of oil. International trade agreements. Oh, the governments can impose tariffs, the religious leaders can howl for blood for their gods, but in the end, it's all about profit. Profit runs the universe, for all that the democratic populations want to believe otherwise." I smile because he is processing this more quickly even than I had expected. "And here is your change. A few decades ago, the business world was no different than nations in terms of self-interest. But a lot of us replacing the old boys wanted to see our grandkids grow up. That wasn't going to happen if we kept on squabbling over the pie. Those grandkids are going to have a world to live in now and we'll have a world to make money in." He's getting it, and I nod. "It doesn't matter which of us you work for. We all win." He doesn't believe me, but he's not ready to say so yet. The Auctioneer is announcing the Started catalog.

"These are the twelve-year-olds." I lean back in my chair and sip my water because the lots I've flagged for my clients won't come up for a bit yet. "You can take a look at the catalogue." I call it up and send it to his field.

"All the stats are there . . . how they test in all categories with a talent assessment, genetic expression index for three generations, and a family stability assessment. I'm here to bid on two for clients. I'm a very successful professional broker—a freelancer. That means I pick well more often than I pick badly."

"No images?" He's scrolling through the masses of numbers.

"Nope." I smile at him, studying his white skin, blond hair. "We're human. You see someone, you make an immediate emotional connection with that appearance and that connection is not logical. So we eliminate it." I watch the stats of the first lot glow to life in my holo field. "Female. She has tested out in the top percentile since kindergarten age. Her family runs a small produce business in Mogadishu. We have quite a few good prospects in Mogadishu right now. But her talents aren't quite what my clients are looking for."

"Are you going to tell me that your organization leveraged the recent democratic movement in Somalia?"

"Actually, it was the combined pressure of China—who has been Somalia's largest trade partner—and several international companies who have been primary markets for cotton, carbon offsets, and IT products that finally brought about the peace talks. It's a fertile source for us." I'm watching the bidding numbers flash on the screen. "MS-International is going to take her. I figured they would. She's just what they look for in a prospect. That's why they leaned so hard on Somalia's stubborn president to crack down on the militias. With China threatening to drop their lucrative trade subsidies—yes, they were pressured by some of our members—the president-for-life caved." Yep. MS-International got her. I sneak a look at my guest but he's staring into space, looking thoughtful.

"Yes, we do run the world," I answer him. "Quite an improvement on thirty years ago, eh? Better equity worldwide, less pollution, we've slowed down global warming, and we have fewer wars."

"What happens to people who get in your way?" He says it very quietly.

I shrug. "Nobody alone is big enough to get in our way." I watch the bidding end and the stats for the next lot shimmer to life on the screen. "No government is big enough to really get in our way. Not any more. I'm buying this one." Unless my main rival is willing to overspend. She's bidding for a Venezuelan financial firm. I doubt she'll overspend. We've both calculated this lot's value to the last Euro.

"What happens when you buy her?" He's watching the numbers flash in the field as the Auctioneer patters the bids.

"Her company makes sure she gets the scholarships she needs and keeps the father's business solvent so that his job as a machinist doesn't go away. Her mother is a ceramic artist and they'll make sure that her popularity is great enough to keep her selling and happy, but not so great that it breaks up the family structure. My client is a carbon-trader and this prospect has the drive and split-second decision making ability—plus a very strong intuition—to make her a powerhouse on the carbon trading floor."

"You manipulate the hell out of these families."

"You sound horrified." I smile. "Is it worse for us to do it than let chance manipulate their lives?" I don't take my eyes off the field. My rival is se-

rious about this lot and one of the small ITs is bidding, too. Not a good choice for them, but they're not large and they're new to the Network so they haven't hired the best broker. They queried me, but they were offering about fifty thousand less than I currently earn. They won't get anybody really good for that price.

"What if the mother is really talented and you keep her from becoming a big hit?"

"Her husband's job wasn't going to survive outsourcing." The new IT company is faltering and then bows out. Wisely. I'm going to get her. My rival is not one to lose her head and bid out of competitive spite. The girl will have more value to my client than to hers. "If he'd lost it, he would have been stuck with a service job and she would have had to take another service job to pay the bills. Our assessment is that the marriage would not have survived."

"What if the girl doesn't go to work for your client's company?"

"She probably will. They'll offer her exactly the job that she's perfect for, the one she's worked toward all her life."

"Because they made her work toward it."

He's starting to get angry again. I make the final bid, take the lot, and text a polite apology to my rival.

"But what if she doesn't want to work for you? What if she decides she . . . oh . . . wants to be a potter like her mother?"

Or a jazz musician like his uncle who died when he was twelve? "Happens. It's like those Thoroughbreds. You buy a nice started two-year-old with a couple of race wins on the local circuit, they may never make it on the big tracks." I shrug. "Cost of doing business."

"What if she's really good and goes to work for someone else?"

I shrug again. "Her purchaser gets royalties from the company that hires her."

"Oh come on." He snorts and a couple of bidders send a look his way—which he does not miss.

I suppress a smile. "You want to belong, you play by the rules." I shrug. "You don't play by the rules—you don't get talented help." I meet his eyes. "People quit their jobs for lots of reasons. Without threats." He is thinking now, and nods. "As I said, we all win. The company that might hire her didn't have to pay to develop her, so they'll pay royalties to the company that did develop her. She's talented enough that she'll earn out and make them money anyway."

"Most of these kids come from pretty low income families." He's studying the catalogue again. "A little social welfare here?"

"That's just the way the genes show up. Natural selection?" I shrug. "You'd have to ask the geneticists."

My other lot has come up. This time, my rival is going to outbid me, I'm afraid. The boy is slightly more suited to her client's use than to mine. I'm right. I reach my limit and send my opponent a virtual bow. She texts me back that she'll buy me a drink, after.

"What would I be like . . . if you people hadn't . . . auctioned me off?"

"Yourself." I meet his eyes and his anger and he finally looks away.

"Who bid on me?"

He had to ask that, sooner or later. I did, too. I have my eye on a couple of other lots just in case I can grab a bargain as an investment, but the bidding is very keen so I shut down my field and stand. He rises with me, recognizing dismissal. Well, he is sharp. Very high empathic rating. He'll make a top negotiator for one of the major companies.

"Okay, so you can't tell me." He doesn't look at me as we cross the carpeted floor to the elevator. The windows are actually high-end flatscreens and offer us a clean and sparkling Bangkok cityscape.

"Illusion." He follows my gaze and his voice is bitter. "The illusion of a real city. Just as my life has been an illusion of free will."

"It's not an illusion," I tell him mildly. "You can walk out of here and go be a jazz musician. Nobody is going to come by your flat and break your knees."

"I'm going to do that." He meets my eyes, stiff with rebellion and challenge. "You watch."

I smile as the elevator door opens and he flinches at the cheap, warped paneling and the faint smell of incense and sweat that wafts out. He has forgotten about the shabby sex bar downstairs. I don't think he's going to like his life as a musician for long even if he wins enough on the poker circuit to live well. Which he may. He has tested out in the top percentile and wants to be the best, have the best, even if he's feeling a bit of adolescent rebellion right now. I watch him straighten his shoulders a hair before he steps onto the elevator. I'll do my best to make sure that he doesn't get killed in some dive as he figures out what he really wants from life, but you can't hedge all your bets. That two-year-old who starts winning the big races can still break a leg on the home stretch one day.

I nod and a waiter comes up with a fresh glass of sparkling water and lime and I go sit back down to watch for bargains.

He was my first. I borrowed the money to buy the Future lot at my first Auction. I'm good at what I do—one of the best. I've personally purchased several excellent Starteds since. They're all close to earning out already and they're my retirement investment. But that first purchase, that first successful Future that you pick up at a bargain rate—it's always going to be special. And I was young.

I wanted to tell him. Even I, who play this game better than nearly anyone, even I wanted to tell him. But then I would have given him a face, a person to rebel against. Right now, he really doesn't have anything except an ephemeral Big Brother that doesn't exist unless you're sharp enough and talented enough to find the threads woven through everything. Even that is not one person, no one Big Brother. No, there are thousands and thousands of pieces to that mosaic—some huge, many small. It'll be hard for him to stay angry, and if he survives his rebellious musician phase, he'll be back.

He may be my replacement, one day, when I get ready to retire. He has the raw talent. I wish he wasn't quite so white. There's that tribalism thing again. I drink my lime-flavored water and watch two of the big ag companies bid against each other for a highly talented bioscience prospect from a high-scoring middle-class Ethiopian family. Low overhead on that one, most likely, so they're willing to bid high.

You know, you never really lose those tribal reactions and even though I can read his genetic profile like your average person reads a menu, that white skin and blond hair still grate on me.

The woman who bought me as a Future didn't tell me either when she walked up to me at the embassy cocktail party I'd crashed on my own anger-driven search and invited me to the Auction. I was at the same stage as my guest, outraged and fascinated by the hints of a vast network of subtle manipulation I'd been uncovering. She told me she owned me years later, at the Auction where I bid on my guest.

I'll probably tell him then, too.

When he buys his first Future.

You get over the shock pretty fast, that shock when you find out that luck doesn't exist. You accept that the world you believed in is simply misperception. Some never figure it out. They spend their lives making discoveries, crunching numbers, inventing powerful new sewage systems or engineering DNA and bask in the warmth of their lucky lives. If you want to congratulate your luck for your success, by all means do so.

No bargains today, and I'm not in the mood to sit through the rest of the catalogue until the post-Auction cocktails. I'll come back later for my drink with my rival. I take the shabby elevator down and tip the mamasan enough that she gives me her best smile. He's gone, of course. I don't keep close track of him. The chip that the clinic doctor implanted while he was being treated for an ear infection back when he was two will let me find him any time I need to. We don't control. We simply create a path, and you follow it on your own. Because that's what you really want to do. The mamasan has air-conditioned taxis standing by and I think I'll take a drive through the real, grubby version of that flawless city you see from the upper room.

Full circle, coming here. The irony of it is never lost on me. My mother worked in one of these sex bars, six decades ago, a runaway youngest daughter from Mumbai without much going for her. She got pregnant by a talented young CEO on vacation from Hong Kong who never acknowledged the baby.

We look for talent where we find it. And when a path opens up in front of your feet, you walk it. Go ahead. Call it luck, if it makes you feel better. ○

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# CUT LOOSE THE BONOS OF FLESH AND BONE

Ian Creasey

The protagonist of this tale was previously seen exploring “The Edge of the Map” (June 2006), but this story’s action takes place much closer to home. The tale’s inspiration stems from a comment made by a fellow member of Ian’s online writing group Codex [www.codexwriters.com](http://www.codexwriters.com). The story has mutated in unexpected directions, however, and bears little resemblance to that original conversation.

In the most expensive nursing home in Scotland, squeezed between the bed and the pastel walls and the racks of brain-imaging equipment, Susanna Munro slumped with fatigue in the visitors’ chair as she waited for her mother to die.

“Don’t slouch!” said her mother, as if Susanna were forty years younger. “You make my neck ache just to look at you. I’ve told you enough times, you should do the Alexander Technique. And put a board under your bed, it’ll do wonders for your spine—”

Susanna knew she needed her spine stiffening, but not only in the way Granny thought. She hadn’t yet said what she’d been bottling up throughout the deathbed vigil. Even now, Susanna’s mother—who had become Granny in family parlance after the birth of Susanna’s own children—still kept rasping out instructions as fast as her ravaged lungs could suck in the air to speak with.

“—Or there’s yoga,” Granny continued after a bout of phlegmy coughing. “That’ll teach you posture. I used to do yoga—I could still do the splits when I was sixty. I could have been a dancer. So could you. You were always showing off when you were a girl. I remember in the garden, you were hiding and I couldn’t see you, and you said ‘Up here!’ and then you

jumped right out of the tree with your arms waving. You could have broken that spine, and then you wouldn't be slouching now, would you? But I was there to catch you. I was always there. Aye, do you remember that garden in Ecclefechan? Apples and plum trees, we had. I wonder if there's any of that jam left? I'll teach you how to make it; I know you're not much of a cook, but even you can manage a pot of jam—"

Granny's eyes clouded for a moment. Her breath sputtered, and a speck of drool trickled onto the pillow. She scratched feebly at the metal mesh that crisscrossed her head, the black wires tightly compressing her white hair as though marking out a grid for some advanced version of tic-tac-toe. You could play moles and warts, thought Susanna. Cysts and scars. Life and death.

Just as Susanna gathered herself to speak, the intercom chimed. "Mrs. Raeburn, it's time for your evening session with the Sensory Insertion Module. Would you like the technician to attend?"

Granny twitched as if jolted back into life. "Oh yes, I need to practice, don't I? I'll start now—send him up later." The com clicked off, and she laughed hoarsely. "It's just as well I could always pass exams. You have to study for everything nowadays, even death." She pulled her arm out from under the paisley duvet, then gave her shriveled fingers a disappointed glare. "Don't just sit there, Susanna, plug me in."

Susanna reached for the SIM cord, and briskly inserted it into the socket behind her mother's left ear. As she bent over Granny's body, she smelled the ancient decaying flesh that the pine-scented air-conditioner tried so hard to mask. It was the stench of mortal sickness, the sign that this time—unlike so many other times when Granny had feigned illness to keep her daughter close—Susanna's mother would never get up from that bed. Not physically, anyway.

Granny closed her eyes. Only the readouts on the SIM console moved, showing data-transfer stats. To reduce the shock of "transition" (as death was invariably called in the brochures), the nursing home's residents spent hours every day with a data-feed into their brain, simulating the post-transition experience of existing as an upload inside the secure servers of Athanatic Solutions Ltd.

"It's getting easier," said Granny, in a louder voice as though she felt more distant and had a subconscious need to shout. "I can see you through the security camera. Give me a wave, dear!"

Half-heartedly, Susanna raised her hand. "Can you hear me?"

"Of course I can. Eh, your hair doesn't look so good from up here. Have you tried getting a perm and dying it back to red? You used to have such bonny hair—it's a shame to let yourself go. Men have roving eyes, and that husband of yours . . . I wouldn't trust him further than I could spit a kitten."

"I'll go back home then, shall I?" said Susanna tartly. "While I'm here at your bedside, who knows what he could be up to?"

"Ah, stop mithering. You won't be here much longer. I'll not last another week. You could be back home tomorrow—and I'll be with you. In spirit, if not in body. Now, let's see if I can find your house. . . ."

Granny's eyelids twitched as she delved through vidlinks from the

nanocams that blanketed the world: originally introduced as an anti-terrorism measure, the nanocams had become so convenient for the uploaded generation that they'd been dubbed the Eyes of the Dead.

"There it is!" said Granny. "Looks like you've been neglecting your garden. I can see weeds in the borders—you have to pull them up whenever you walk past. Keep on top of them, or they'll get out of hand. And all your tomatoes are parched, just little green lumps. You should rig up an electric sprinkler. Then when I'm installed on your house network, I can water the tomatoes every day and give them exactly what they need."

The prospect made Susanna seethe. "You won't want to bother doing that. After all, you won't be eating the tomatoes."

"Not at first. But technology improves; they'll give me all the upgrades. If an upload can see, why can't it taste? It's just different data. Oh look—your bairns are coming out. They're running around the lawn, and they've only just had their tea. You've got to let it settle!" she yelled, forgetting that the children couldn't hear her. "Ach, you need me to babysit for you. If you're going to keep gallivanting across the globe, you need someone minding the home front."

"I have a husband to do that," snapped Susanna. She left unsaid that she'd made a career in journalism precisely to avoid becoming an over-stifling mother to her children.

"Then where is he?" said Granny. "Inside watching football on TV? Off with some tart somewhere? Your youngest is only six—she could break her leg and he wouldn't even notice!"

"The eldest is eleven and she knows how to call someone if anything happens. Which it won't. Stop fretting! And look at me while I'm talking to you," added Susanna, throwing back a line that her mother had shouted countless times over the years.

Granny opened her eyes, and blinked furiously as she struggled to reconcile conflicting images from her data-feed and her physical senses. "Fretting, eh? So I'm not supposed to care about my own grandchildren? I can't imagine why you'd rather they break their leg than be properly looked after."

Susanna breathed deeply, attempting to defuse her anger. This kind of argument would erupt every day if she allowed Granny's electronic ghost into her house. She mustn't let that happen. But how could she refuse her mother on her deathbed? How could she break a lifetime's habit of Granny getting her own way?

A man in a black-and-silver suit entered the room and hurried to the bed. "Mrs. Raeburn, such a pleasure to see you again. I was monitoring the SIM from downstairs—you're doing wonderfully well!" The Athanatic technicians always told Granny that she was doing wonderfully well; no doubt it formed part of the premium-rate transition service. Susanna tried not to resent the loss of her inheritance, but in her weaker moments she couldn't help thinking of other uses for all the money her mother had paid to be virtualized.

Granny began questioning the technician about the data-feed, and Susanna took the opportunity to slip away for a few minutes. She didn't like leaving Granny alone—if her mother died with no one beside her, Susan-

na would never hear the last of it. The uploaded personality would add it to the long list of grievances and throw it in her face every time they argued over what time the kids should be sent to bed.

Longing for some fresh air after the vigil in Granny's stuffy room, Susanna headed outside into the neatly maintained gardens, full of yew hedges and neoclassical statues. Decades as a journalist had filled her head with miscellaneous facts—she remembered that the yew was a symbol of immortality. The evening breeze carried the scent of roses from the formal flowerbeds. Flapping her hand to ward off midges, Susanna paced across the lawns and past a gurgling fountain, until she arrived at a stone archway with a motto incised across the span:

*Cut loose the bonds of flesh and bone  
To find the realm thy soul doth own*

Susanna's writerly instincts rebelled against the pseudo-archaic language, coined by Athanatic's marketing department less than a decade ago; her finger twitched on an imaginary *Delete* key as she passed under the arch and entered the necropolis beyond.

Obelisks and tombstones and mausoleums lay crammed together in a hotchpotch of garish styles, each competing to look grander and more expensive than the next. Animated displays showed dead men's triumphs, and post-transition holograms told tales of their lifetime achievements. In the far corner, a tinny thud leaked through the sound-baffle around a goth nightclub held in the crypt of someone who felt that death made him all the more fashionable a DJ. A gaggle of teenagers in white pancaked make-up lounged on gravestones drinking cider, ignoring the holograms who tried to impart their wisdom. No lichen splotched the gravestones; no ivy shrouded the freshly chiseled monuments.

Somewhere below Susanna's feet, a secure vault contained the infrastructure of the electronic afterlife. Supercooled computers stored the encoded personalities of the deceased, connected to their mausoleums and holograms through triply redundant cables. Uploads could maintain a local presence, but the vault's servers also accessed the Net and hence the whole world. The brochures elided delicately over the security aspects, alluding to protective firewalls and backups—since, of course, the Athanatic residents were a magnet for hackers. Many of the first generation of uploads had been zombified into human spambots touting baldness cures to distressed relatives who only wanted to ask Great-Uncle Wayne where he'd hidden the keys to the safe.

Apart from the giggling teenagers attending the goth disco, not many people visited the memorial garden. After all, every cenotaph had its own email address, its own telephone number. Anyone wanting to contact the dead could simply dial them up on the Net. Some of the deceased passed their time offering psychic readings, spirit-guide services, and the like. Others wrote blogs, memoirs, or the novel they'd always planned to get round to. Susanna resented those who set themselves up as journalists, leveraging a lifetime's expertise into endless punditry and pedantry. It was already hard enough being a freelance writer, without having to compete against dead columnists who could extrude wordage with no need to eat or sleep or soothe children's squabbles or attend sick relatives' deathbeds.

Susanna checked her messages. No offers of work had come in. She sent a quick note to her husband and eldest daughter to tell them she'd probably stay at the nursing home tonight. Then she took a final look around the necropolis, trying to spot a tasteful style of monument that would suit Granny's personality . . . and trying to find the words that would persuade Granny to stay here with her fellow ghosts.

She imagined Granny telling those teenage girls, "I hope you don't walk upstairs on the bus wearing those short skirts." No one would listen to her. Who cared to be hectored by the dead, other than family? How could she tell her mother that her family didn't want her? Susanna, whose whole career was built upon words, couldn't think what to say.

"Where've you been?" asked her mother when Susanna returned. "I could have passed away, and you wouldn't even have noticed. I won't be here much longer; the least you can do is hold my hand while it's still warm."

Beside the bed, an Emo-Scan glowed the purple of deep indignation. Granny's helmet of wires recorded the myriad signals of neurons firing within the skull, building up a history of thought-patterns for the upload's personality algorithms. To aid the process, Granny took a daily dose of stimulants, ensuring that she could think and talk coherently in the pre-transition period.

"I went down to the memorials," said Susanna. "Have you decided what style you want?"

Feebly, Granny shook her head. "I'm not having one of those mausoleums. That stuff's obsolete. Why have a bloody great monument cluttering up the place? Why have a gravestone at all? You only need a marker to remember those that are gone. But I won't be gone. I'll still be with you. Look!"

A hologram appeared of a young woman with freckles and sharp cheekbones. At first, Susanna didn't recognize the figure, who looked so different from the aged, shrunken occupant of the bed.

Granny smiled. "The best thing about death is that after you die, you can be beautiful again. I can project any hologram I like. Which do you think is best? This is me when I was nineteen. I was so slim! My boyfriend used to joke about me, said I had to run around in the shower to get wet. Aye, I was a bonny lass—I turned a few heads in my time. After I had you, of course, I put some weight on." The hologram changed: the woman growing older, her red hair now tied back. "This was taken after I married, before he left me. You were sick on that dress. You were always making yourself sick—you were sick in a wedding once. Everyone stared at me, when it was you puking! By 'eck, we could take you anywhere twice—second time to apologize."

Granny cycled through a few more holograms, all virtualized from old photos. "The Exogram has voice-projection as well. So when I'm installed in your house, it's just like I'm really there. Then I can look after the bairns whenever you want to run off after one of those stories of yours."

"I don't travel so much nowadays," said Susanna quietly. The ubiquitous nanocams had reduced the need for journalists to travel to see what was happening elsewhere.

"But you go out of an evening, don't you? Theater and all that."

"That's not the point." Realizing that there'd be no better time, that she must get it out however she could, Susanna blurted the rejection she'd bottled up for so long. "I'm not having that hologram in my house." She tried to sound assertive, but in her own ears her voice sounded like a childish whine.

"I can change the picture. Look, here's another version." The hologram became a cartoon cat with Granny's eyes. The sinister figure looked like the villain in a horror anime. "Kids love cartoons," said Granny. "I won't just be a babysitter, I'll be a friend to them."

"It's not the hologram," said Susanna, determined not to get side-tracked. "I'm not having you in my house at all."

"Don't be silly," said Granny. "Where else would I go?"

"The memorial garden. Or anywhere. But not my home." Now that she'd finally spoken, Susanna's resentment poured out. "I'm not having you looming at the kitchen table every day criticizing the cooking, or trying to send the kids to bed at eight o'clock when they're not tired, or floating round all the ceilings checking for dust. . . ."

Susanna felt her cheeks getting red. She hated family confrontations, because she knew how long the poison lingered. As a journalist, she had put hard questions to government ministers, accused executives of corruption, and chased wrongdoing fearlessly. But you filed a story and moved on. You didn't have your subjects haranguing you for months on end, wearing you down. You didn't have to live with the fallout for years—or, in a world of post-death uploads, forever.

"Well, I never thought I'd see the day," said Granny, her eyes blazing. "I can't imagine what's got into you. I suppose it's the shock. I know it's hard for you to see me like this, when I used to be so strong, when I brought you up with my own hands and looked after you all those years. Now it's the other way round—now I need someone to care about me, someone to look after me and give me a home. I won't even have a body, so it's not like I'll get in your way. You won't have to change my nappies, or wipe up my puke. You won't need to feed me, wash my clothes, take me to school, and watch me playing so I don't get hurt. All I'll need is some space in a corner. Is that really so hard?" Her voice cracked. "I didn't know it was so much to ask, just to be with my family in the cold dark world after death."

A single tear rolled down Granny's wrinkled cheek. Susanna glared at the tear with loathing. It represented all the emotional manipulation she'd endured throughout her life. *Don't give in to this*, she told herself. *Stand firm. You should have stood firm years ago.* Thinking of her own children gave her the strength to resist. It was too late for Susanna to have a normal childhood, but she wouldn't let Granny's ghost blight the lives of Michelle, Toby, and Vanessa.

As Susanna stayed silent, Granny struggled to lift her head from the pillow. More tears leaked across the craggy, sallow flesh. "It's a lonely world without your own flesh and blood. If I don't have family, what do I have? Are you abandoning me?" Her voice quavered.

"I'm not abandoning you," said Susanna. "I'm here, aren't I? We just need a bit of distance, that's all. I'm not a child any more—I don't need

daily tellings off. You can stay in the memorial garden, and we'll see each other on the phone." She wondered how long that would work, with Granny calling her every five minutes. After all, she'd have nothing else to do. But call-screening was a wonderful thing.

"Ah, the duty phone call," said Granny savagely, "when whatever I say, you always have that same scowl on your face as when you wouldn't eat your greens. I'm not trying to poison you!"

"I know," Susanna said, trying to ride out the backlash without weakening.

"I cared for you, I brought you up when your father walked out on us." Granny's voice softened to the loving tone that Susanna remembered from childhood, when her mother read bedtime stories, played silly games, soothed sniffles and scrapes. "I only ever wanted the best for you."

Reluctantly, Susanna acknowledged the truth of that. "I know." No matter how overbearing, her mother always meant well. She wanted Susanna to live in a perfect world, and tried too hard to impose it.

"Aye, we've had our problems, but we can work it out. It'll be a new start, a chance to make things right. I won't be the same mother you had before. I'll be dead! It's a heck of a change. You know what they call it in the brochure? An awfully big adventure. Can't we start the adventure together?" Granny's voice became huskier throughout this speech, which terminated as a pleading whisper.

Susanna instinctively suspected Granny of hamming it up. But maybe that mindset, that ingrained rebellion—"obstreperous child!"—was part of the problem. Defiance evoked her mother's controlling protectiveness, which then incited Susanna's revolt, for another loop round the endless futile cycle that had swallowed so many years in bickering and bitterness. Yet Granny's mortal illness wasn't histrionic. The old back-and-forth would soon end, one way or another.

Would it be too harsh to deny Granny's uploaded personality a home, without even giving her a chance to change? Susanna wavered. Perhaps they could break the cycle and start again. Granny might not be her old domineering self when bodiless and dead. And Susanna could get holographic projectors with an external on/off switch only accessible to flesh-and-blood hands. . . .

"Maybe we can give it a go," she said. "Just to see how we get along."

"Of course we can," said Granny briskly. "It'll be fine—don't fash yourself. Now, you'll need to read the set-up guide in the brochure. I already ordered the Exogram 5000, and it'll be delivered to your house next week. There's a dedicated comlink to my electronic brain, and all the projection equipment is in a self-contained unit with its own power-supply. I'm not having people switching me on and off like a radio." She paused and wheezed for breath before continuing. "The substations go on each floor of the house, and the remote units cover the garden. It has multi-presence so I can babysit anywhere simultaneously. You'll need to patch me into the house network, so I can make myself useful by switching things off when you're asleep and whatnot. We need to save energy, don't we? And I'll have a relay from the burglar alarm to alert me if anyone tries to break in—"

"I can see you've been planning this," said Susanna, suppressing a familiar irritation. It was typical that Granny had already assumed her consent and arranged everything.

"Aye, and what else would I be doing? This isn't a holiday camp, is it?" Granny paused, momentarily losing the thread of the conversation, but recovered herself. "I'll need a list of your children's friends. I can get their classmates from school records. Then we'll do a bit of research, watch the nanocams, make sure they're associating with the right sort of people. It's never too early to stop them falling in with a bad crowd. I know they're young, but it won't be long before they're offered drink and drugs—not if we don't do anything about it. It's hard to break children's friendships when they're established, but kids can't make friends with people they don't see, can they?"

Susanna knew this all too well. She frowned, recalling the times in her childhood when she'd been told that so-and-so had moved away, or was ill, or didn't want to see her.

"Don't look so resentful," Granny said. "It was for your own good. You didn't grow up an alkie or an addict, did you? There's plenty of people your age who never left the tenements, never had the prospects I raised you for."

"And have you already picked out who your grandchildren are going to marry?" said Susanna. In her twenties, remembering what had happened with "unsuitable" childhood friends, she had simply refused to tell her mother anything about her love life. It was easier then, having left home. She'd become a journalist so she could escape—chase stories across the globe, and shake off the smothering influence of her mother. She once wrote a column on the linguistic coincidence that "mother" was so close to "smother."

"Ah, that might be beyond me. You made your own bed there, didn't you, dear? He's lasted longer than I thought, I'll say that." Granny smiled. "I'm so glad we've patched things up. I feel much better now—I didn't want to die with bad blood between us." Beside her, the brain imager's displays blinked in a slower rhythm, as if Granny's final agitation had been soothed.

Susanna didn't feel that they'd patched things up. As so often, she felt browbeaten into submission. And now that she'd agreed to everything her mother wanted, Granny would die to make sure she didn't have a chance to change her mind.

A soft buzzing snore came from the bed. Susanna reached forward and rested her hand on Granny's arm. Under the cotton nightgown, the flesh felt soft as an overripe pear, the bone as thin and brittle as dry spaghetti. Susanna remembered that same arm throwing Frisbees for her to catch . . . deadheading roses, ironing blouses, hammering in tent-pegs . . . hugging her, pointing at her, slapping her . . . always working, moving, writing a shopping list, filling in a crossword, stirring batter for chocolate cake. Now the arm lay still. Tears welled up in Susanna's eyes, and she raised her own arm to wipe them away.

If Granny became a hologram, how could she play with her grandchildren? How could she throw a ball, make tea, carry the coats and bags? How could she be there for them?

Ah, but the Athanatic brochure had answers for all these questions.

Holograms could play hide and seek, could tell stories, could pretend to be pets or ghosts or monsters. They could watch TV with children, help them navigate the Net, and ensure they didn't find porn or violence or anything unsuitable. Holograms could oversee a household and be constantly on call for emergencies—so said the FAQ. But knowing Granny, Susanna wondered who would be on call for whom.

She stood up and stretched. A sudden hunger struck her; she'd barely eaten all day. Looking at her mother's sleeping form, she felt safe in going to grab a quick meal.

The canteen was always open, more for the benefit of visitors than for bedridden residents. While she selected salad and yogurt, it occurred to Susanna that her next encounter with Athanatic Solutions might not be as a visitor, but as a "pre-transition guest." The upload process would inevitably become more affordable, even commonplace. Would she want it for herself? Her mother would surely be keen to induct her: with Granny as the family matriarch, there'd be vacancies for junior attendants, generation after generation.

Susanna shivered, imagining an electronic eternity in her mother's embrace. But she wasn't on her deathbed yet; she shouldn't worry about her own upload while she still had Granny's to deal with. Soon she'd need to arrange things at home and talk to her husband, who would hardly welcome this new addition to the household. She'd have to give him a hologram-free zone—where Susanna could join him to get a little peace.

Her phone rang. A man's voice said, "Mrs. Munro? I'm afraid your mother. . . you'd best get here quickly if you can."

The sunset's rays illuminated whirling dust motes in the air. For a moment, the floating specks seemed to freeze—everything froze—and the just-eaten food turned to lead in her stomach. Susanna swallowed hard.

A cold analytical part of her brain said, *You knew this was coming. It's not like it's a shock.* Yet Susanna's affronted emotions said, *I was only gone ten minutes. How can she have died in ten minutes?* Irrationally she felt it should have taken longer, that no one should be able to slip away in the gap between one moment and the next.

When she reached her mother's room and saw the two doctors, she knew from their postures that she'd arrived too late. They stood by the bed, respectful yet relaxed, their work—such as it was—already over. On the brain-imaging machine, all the lights had dimmed, save for one red glow. There would be no attempt to resuscitate; there was no point in delaying the transition that Granny had signed up for. Indeed, only legal conservatism—tiresome statutes against murder—prevented the residents being conveniently euthanized to smooth the process.

As a journalist, Susanna had often witnessed death and its aftermath. She should have been inured to it. Yet now, at her mother's passing, the scene flickered in her mind with stroboscopic vividness, a series of silent snapshots like an ancient photo album. The doctors turned, spoke to her—she did not hear them—then left the room. Another man entered, carrying a clipboard. From his black-and-silver uniform, she recognized him as an Athanatic employee. He said something, then held out the clipboard. She stared at him, noticing that his name-badge projected a tiny

hologram with the words "Noel Bullinger" in front of a silver yew tree. A speck of dirt on the badge clouded the letter G in the hologram.

His hand touched her shoulder. "Mrs. Munro? I'm so sorry to disturb you at such a difficult time—but it's important that you sign this now. Your mother's brain will start to decay very soon. The quicker we can start Stage Two, the better."

Stage Two—the dissection. They were going to slice open her mother's skull, remove the brain, and perform what the brochure delicately described as a "physical scan," recording the final state of every neuron and synapse, every thought and memory. The process destroyed the brain, which was why the uploading procedure could only be performed after death.

"As next of kin," he said, "you have to formally authorize us to implement the transition."

"No," whispered Susanna.

"I'm afraid the law requires us to obtain your signature. Believe me, I'd rather not have to ask. But—" Again he proffered the clipboard, which held a release form and a cheap blue pen.

"No," Susanna said. "I'm not going to sign."

He paused, and touched her arm again as if he'd been told in some customer-training seminar that this would help bring dazed relatives out of shock. Distractedly, she wondered if he would keep manhandling all the way down from her shoulder to her fingers in search of a button that he could press.

He spoke in short simple sentences, addressing her like a child. "This is what your mother wanted. It's why she came here. We explained all this at the induction. She would want you to sign."

*Yes, and Granny always gets what she wants.* "Not any more!" cried Susanna. She wrenched the form off the clipboard and tore it up, throwing the pieces on the floor. "I'm not signing." Susanna wanted to run out of the hideous pastel room, before her mother's corpse lurched from the bed and hugged her in an icy grip from which she'd never escape. But in a more rational corner of her mind, she knew she had to stay, to make sure that the technicians didn't decide to skip the legal niceties and proceed anyway. The regulations demanding post-death family authorization dated back to the early days of the upload technology, when the Net seethed with scare stories, but the legislation was now little more than a formality—unless she enforced it.

Bullinger stared at her as if unable to comprehend Susanna's refusal. At last he said, "Is this about the money? Mrs. Raeburn already paid for the transition and the first two hundred years of post-transition maintenance. The fee is non-refundable."

"Then you don't care, do you? Keep the money and get out!"

He stalked away, his jaw clenched as though restraining an unprofessional retort. With stiff politeness, he turned and said, "There's a short window before the brain decays too far to scan accurately. I can see you're distraught, so I'll leave you alone to think about it. I'll come back in fifteen minutes with another copy of the release form, in case you've changed your mind."

The door slid shut, and a hush fell. Susanna gazed at her mother's body. It looked crumpled, worn-out, the sour expression not at all peaceful. The thin lips appeared to have a lot more left to say. *Susanna! Don't just stand there like cheese at thruppence. You heard the man—my brain's decaying by the minute. Sign that form, and hop to it!*

The remembered voice rang out clearly in her head, the intonation familiar from decades of commands and complaints. Susanna didn't need to resurrect her mother to know what she would say in any given situation.

Yet was this just childish stubbornness? How would Susanna feel when her own turn came? She imagined herself on the bed, her children crowding round. What would they say? *You were never there for us—why should we bring you back now?* Susanna had been careful to give her children space, to love from a distance and allow them freedom. But, remembering Toby's tears before she left on that last trip to Africa, she realized they didn't know what she was reacting against. She could bring back her mother, show her grandchildren what ever-present nannying was really like. . . .

No. Granny was dead, and Susanna didn't need an overbearing ghost in the house. She could raise her children herself, and at least her mistakes would be her own.

*You spiteful girl,* said Granny's voice in her head. *I suppose you think you can get a great newspaper column out of this. Maybe even a documentary, "How I Unplugged My Mother." You only ever think of yourself—*

*I stand up for myself,* Susanna mentally retorted. *Finally.* If she had a sliver of ice in her heart, she knew where she'd inherited it.

She grasped the bedsheet and shrouded it over her mother's face. "Goodbye," Susanna said. Then she waited for the last dial on the brain-imaging equipment to fade from red into darkness. ○

## THE GHOSTS OF CHRONOPOLIS

In Chronopolis,  
city of changing light  
upon the squares,  
leaves are scattershot  
in shifting patterns  
across the pavements.

There are no clocks  
for the ticking.

For each of us  
home to this dimension  
and its relative time,

the passage of hours  
remains subjective,  
honed or stretched from  
one perception to the next.

Those who leave Chronopolis,  
city of light and shadow  
upon the pavements,  
never return.

Except in the dreams  
of those still created.  
Except as sheer specters  
haunting the rooms  
of their ruined lives.

You can hear their  
diminished apparitions  
scrabbling through  
the streets of Chronopolis,  
city of stone and sand,  
light and ablation.

You can sense their  
ghostly shades falling  
like desiccated leaves  
across the spectrum  
of the achromatic dusk  
as it sheds illumination.

You can almost see them  
in the dark, fading sparks  
that could be no more  
than the expiring rods  
and cones of your vision.

—Bruce Boston

# SLUG HELL

Steven Utley

Except perhaps for the sunken city of R'lyeh where he's undoubtedly very popular with the bus-sized trilobites that scavenge there, Steven Utley is an "internationally unknown writer." He's a member of the infamous Turkey City Gang, but so far has managed to stay mostly out of prison. Steven has done a number of collaborations with the likes of Howard Waldrop and Lisa Tuttle. His most recent collections are *The Beasts of Love* and *Where or When*. In spite of little resemblance to the Silurian, the setting for which he's most noted, Steven Utley lives in Tennessee.

Silver, just returned from or soon to return to Slug Hell, avails himself of the base camp's facilities and its denizens' impersonal hospitality. He is just passing through, coming or going, and during the time he must spend here, resting up from or for his labors on the other side of the divide, he is conscious of being an interloper among insiders. It is, he thinks with wry amusement, the story of my professional life.

In common with nearly everyone else at the base camp, the three men whose tent he shares, Burleson, Martin, and Carstairs, work hard from sunup to sundown and consequently do not keep extravagantly late hours when they can avoid it. They have taken him in, but they have their own missions to accomplish and their own social arrangements to help them endure in this primeval wilderness. Silver therefore makes a particular effort to observe the niceties of camp life. There are no niceties where he either is going or else has just been, but he is naturally a quiet, even taciturn, individual and manages to be unobtrusive among other people without being standoffish toward them.

The camp itself, compared with Slug Hell, is the lap of luxury. He sleeps restfully on a comfortable cot and eats reasonably well-prepared food that does not grit between his molars. He soaks up water, color, sound, conversation. The camp members, both civilian and Navy, have their own recreations, so Silver has a chance to watch a softball game and listen to much recorded music, all kinds of music, and attends an informal exhibition put on by the expedition's Sunday painters. He is charmed by the paintings, which tend to depict not the muted Paleozoic

vistas here but explosions of burgeoning Holocene flora. Everybody misses flowers.

He naps after these recreations, enjoying restful sleep of a sort impossible on the other side of the divide. Even deep in this restful sleep, however, he cannot remember whether he is either lying on a cot at the base camp dreaming of the saltlands, or lying in his bedroll out in the saltlands, dreaming of the base camp.

Somehow, now I am aboard the helicopter as it settles earthward. A swirling grayish whitish cloud raised by rotor blast expands outward from a point directly beneath the machine, loses momentum quickly in the thick hot translucent air, but takes its time diffusing.

The Navy aircrew and I, the lone civilian, peer out. The almost perfectly flat, almost perfectly white plain extends to the shimmering horizon in every direction. The pilot twists around in his seat to ask, loudly but still barely audibly above the dying whine of the generator and the slowing whir of the rotor, "Are you *sure* you want to get out here?"

I nod jerkily, probably resembling a bird dipping its head. The Navy people think all us scientists resemble birds, more or less.

The flight engineer's expression twists with consummate distaste. "Slug Hell," she says.

I smile, admittedly a bit thinly, and check my gear a final time. I would be traveling light, carrying on my own back my entire camp, shelter, food, equipment, but for the all-important water tank which two bluejackets manhandle out of the helicopter. Unless you propose to drink brine, you bring your own liquid refreshment to this place.

I step out and down and separate myself from the machine and its crew. Brown, hard, gaunt, I already look desiccated, like an insect husk.

The helicopter lifts through a vortex of stinging dust, circles once, then heads west to complete its supply run to camps on the far rim of this basin. The crew will rest and service the helicopter, then pick me up on their way home to the base camp. I am on my own for the time being.

Of an evening, Silver accompanies his hosts, Burleson, Martin, and Carstairs, to the mess tent and returns with them from it. Silver and Carstairs sit or lie on cots opposite Burleson and Martin, and Carstairs reaches into his seabag for the treasured bottle of scotch, and everybody nurses a measure of liquor for a time and nobody speaks. Then the lamp is turned out, the men settle on their cots, sigh. Carstairs and Burleson and Martin somehow decide among themselves—tacitly, perhaps telepathically (Silver knows how it can be among people who work and live together, he has not always been a solitary field researcher)—whether to finish off the day with conversation or to settle for no conversation at all and just go to sleep.

When there is conversation, it usually pertains, such as it is, to that day's work, or to exciting news passed along from colleagues in camp—so-and-so has found a unique patch of lichen, or netted a strange new bony fish, or spent the afternoon sexing trilobites—but inevitably the talk (such as it is) turns to home and everything that home has that this

world does not have. It is almost ritualized, and Silver welcomes the litany.

"After looking at psilophytes all day," Burleson says, "when I close my eyes, I see garden flowers, just a riot of them. Tea rose, columbine, zinnia, veronica, campanula, regal lily, Darwin and cottage tulips. Delphinium, gladiolus, peony, chrysanthemum. China aster, dahlia, snapdragon. Bearded and Japanese iris, pansy, trollius. Ah, ah!"

Ah, ah, indeed, thinks Silver.

"It's wildflowers for me," says Martin. "I was a hiker, not a gardener. I hiked all over North America. Slogged or canoed through the parts that weren't really conducive to hiking. Give me senna, wild iris, lotus, mockasin flower. Give me swamp milkweed and sneezeweed. Jacob's ladder, fringed gentian, pitcher plant. Lupine. Rose mallow."

"Ah," says Burleson, "ah!"

Ah, thinks Silver, *ah!*

"Lilies," says Martin, "I always loved the lilies. Tuberous water lily, yellow pond lily, meadow lily."

"Blackeyed Susan," says Burleson, "and bee balm and red trillium."

"Greater bindweed!"

"Butterfly weed!"

"And don't even get me started," says Martin, "on desert plants."

"Or flowering trees and shrubs."

I am in a place of silence.

The eardrum is an amphibian innovation, and amphibians themselves are an innovation whose time isn't due for many more millions of years. The only terrestrial vertebrates on earth (if this is earth; the physicists say no) are myself and my fellow human beings—all of whom are well out of earshot, over the divide, where rain falls and rivers run and things grow and thrive, and where my fellow human beings study rain, rivers, growing thriving things, and a good deal more besides. Can't blame them. *This*, however, is my chosen sphere of activity, and even I admit that it's an utterly hellish place. Evaporite basins always are. I've seen salt flats before, but this is the grandmamma of 'em all, stretching to the horizon and beyond in three directions. Somewhere far off is a sea that's being squeezed out of existence.

Let me make you a crude map of the world as it is now. Here, straddling the equator, is proto-North America, called Laurentia. Northeast lies Baltica, southeast lies Avalonia, both separated from Laurentia by the proto-Atlantic. Beyond Avalonia are the Rheic Ocean and a seafloor-spreading zone that's pushing Avalonia and Baltica into Laurentia. As these landmasses close, land levels rise, and the sea withdraws. It's a slow process, of course. The sea retreats by fits and starts, inches or fractions of inches at a time. Here a lagoon gets isolated and begins to evaporate. Along the seaward lip some water still spills into the lagoon, and that water, too, begins to evaporate, and the lagoon gradually fills and shrinks as chemicals in the seawater precipitate. Hydrated sulfate of calcium. Sodium chloride. Anhydrite. Potassium and magnesium salts. The bones of the sea. As that Navy gal called it: Slug Hell.

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My specialty is extremophilic organisms. Apart from myself—again, an interloper—prokaryotic extremophiles thriving in these brine pools are the only living things in this hot silent monochromatic hellhole. The majority are haloarchaea, but all are extreme halophiles adapted to very high concentrations of salt; amino acids on the surface of their cellular machinery permit retention of water molecules. Indeed, they require a minimum of ten times the salt content of ocean water to exist. For all their adaptations, however, they are fragile organisms—place them in distilled water, and they instantly lyse, burst, and die from the change in osmotic conditions. Their domains, marked by red streaks due to carotenoid compounds in the cells, provide the only real touch of color. They are, to me, the most remarkable lifeforms on earth.

Probably they were the first living things on earth and probably they'll be the last. Eventually, terrestrial geologic processes will stop, the atmosphere will thin, the seas evaporate entirely. By the time the sun starts to die, the dominant lifeforms on earth, the culmination of billions of years of biological evolution, will be some orange and pink streaks in a brine pool. Not to worry, however. Very similar organisms surely live in essentially the same extreme conditions on other worlds circling other suns. All hail the extremophiles!

But do it quietly.

I love the little buggers, but they are truly lousy conversationalists.

Carstairs laughs shortly. Carstairs' moment has arrived; his contribution to the litany is contrapuntal, and Silver welcomes it. He feels the greatest affinity for Carstairs.

"You have something to add?" asks Martin, as though he did not know what the answer will be.

"You two are a panic. You carry on like botanizing young ladies in Victorian England."

Burleson says, "Don't tell me you never look up from your pale gray fungi and look around at this pale gray landscape and wish there was a splash of color in it somewhere."

"Plenty of color splashed around here," Carstairs says.

"Earth colors," says Martin, "muted, washed out. Nothing *vivid*. Nothing the eye can really fasten on."

"Beg to differ. Sky here's so blue you can't look at it for very long at a time. And the swamp—all that vibrant chlorophyll green. Look out over the sea, it's velvety purple out beyond the headlands."

"But no *hot* colors," says Burleson.

Silver can almost hear Carstairs grin in the darkness. "Find yourself a volcano."

"No reds, I mean, no oranges."

"I just miss flowers, is all," Burleson says. "Psilophytes have their charms, but I'd just like to look at, oh, a magnolia blossom."

"Send for a picture of one from home."

"A *real* one."

"Then wait around here till the Cretaceous," Carstairs says. "Isn't that when magnolias first appear? Meanwhile, I rejoice in my fungi. They're

already everywhere here in Paleozoic time. The most opportunistic multicellular lifeforms on Earth."

"Funny," says Martin, "I'd've said politicians."

Everybody laughs now and settles himself for the night, the evening's entertainment being concluded.

I love this work and am good at it, but this place even gets to me. I have dreamed that as I lay sleeping out here the very earth sucked every drop of moisture from my body. I have dreamed that things came out of the brine pools on moonless nights.

I dreamed of a man who came staggering across the saltlands. He was ragged and filthy. He had lost his equipment, his supplies. He had lost his way. He had lost his mind. I took him into my tent, though it was barely big enough to shelter me alone, and shared with him my meager food and water. Late that evening he began to babble of Biblical events, the Deluge, the Ark, the recession of waters. Somewhere behind this saltland, he said, were the fabled first cities of post-diluvial time. He was dead by the following morning, and I buried him in a grave scooped out by hand. "Better than embalming," I said, to no one in particular.

Poring over my specimens I suddenly overhear myself mouthing the words of a song popular back home,

"She had different faces,  
Different ones for different places  
And every hour of every day,  
And no one knew the whole array,"

and feel, suddenly, alone as I am, embarrassed.

Do I *miss* people?

Somewhat. Slightly. There are people back at the base camp whose company I enjoy. Anarchists, mostly, whose chief amusement, the thing from which they derive the most pleasure (apart of course from their work), is annoying the authoritarians. The authoritarians for their part regard the anarchists with disdain and suspicion, which is how it ought to be. The authoritarians, the true ones, are as few in number as the true anarchists, but the authoritarians have people, myrmidons, to do their bidding. Living and working in the midst of this amazing primeval world's myriad wonders, people with a distinctly small-town-in-the-midwest Junior-Chamber-of-Commerce view of everything. This is not to say that they, any more than members of the other two groups, are incompetent scientists, or, any more than the true authoritarians, incapable administrators, or, any more than the anarchists, bad human beings. It's just that for people uninfected with boosterism, they are a royal pain in the ass.

These groups are capable of working together, for they are, all of them, highly trained professionals. Yet the struggle always rages between them, manifesting itself in matters as trivial, or as some people would put it, as *seemingly* trivial, as what to call the base camp. Its prosaic official designation is Number Two Camp; its real name, however, is Stinktown, because it's located at the mouth of an estuary, and at low tide it smells like the world's biggest *binjo* ditch. The first Paleozoic explorers necessarily established Number One Camp where the vagaries of the so-called space-

time anomaly put them, which happened to be approximately where I am right now, smack in the middle of a desolate evaporate basin. The camp was abandoned as soon as a relatively more hospitable site became accessible. Only a lunatic would come back here.

And here I am, again.

I could have brought along a chip player, of course, one small enough to fit right into my ear. I always tell myself this after I have actually arrived in Slug Hell. I think I prefer to hear music with my mind's ear as I work. For one thing, my brain has much greater storage capacity than any chip. For another, I have perhaps inherited my memory for music from my great-great-grandfather.

The evening's entertainment being concluded, Silver settles himself for the night, but sleep comes on him more gradually than for the other three men, affording ample time for reflection. He has an excellent, even an extraordinary memory, keeps his diary in his head, everything perfectly organized and accessible. He has only to reach in and pluck out the memories of similar evenings spent as a guest in similar tents, listening to similar litanies. One, in condensed form, goes: In the bay there are reddish placoderms with silvery bellies, and honey-colored sea scorpions and chocolate-brown ones and shiny black ones. The primitive land-living scorpions look just like their descendants four hundred million years from now, just like the ones back in Texas, even to having exoskeletons that reflect ultraviolet rays from moonlight and other sources; in the darkness, they gleam eerily, fluorescent green and pink.

Another goes: Where most of you see only dull earth colors, I see a wonderful mosaic of white, gray, black, tan. Black basalt, gray granite. The beaches here are multicolored with flecks of brown feldspar, with quartz, clear, colorless, or tinted amber, peach, and pink.

And Silver thinks: There are vast stretches of beach white with coral and shell fragments that would unnerve me if not set off against the blue sea and sky. It is only the unrelieved whiteness of the saltlands, stretching to the horizon where the sea has evaporated, that disturbs my sleep.

And Silver thinks of his great-great-grandfather, whose unpublished memoirs tell how, still in his teens, he escaped from Nazi Germany on foot during the late 1930s. (The rest of his family remained behind and were wiped out.) He walked the whole way to Marseille, where he booked passage or hired on as a deck hand (this much is rather unclear) to the United States. He was a great music lover, not a bad cellist in later life, and claims to have kept himself sane during his trek by playing out favorite Mozart and Brahms pieces in his head. He never whistled or hummed, he simply made the music happen in his head. Writing as an old man, he summed up his experience in this way: "Anywhere we find ourselves, we upright apes cannot do without beauty, even if we must carry it around inside our big ape heads." Throughout his journey across Europe, he had especially cherished the wrenching middle movements of Bach's Concerto in A Minor and Mozart's Piano Concerto No. 21.

And Silver thinks, in the moment just before he happily yields to sleep: I like those, too. ○

This is Will McIntosh's second story for *Asimov's*. He has an upcoming tale in *Science Fiction: Best of the Year 2008*, and has also published in *Interzone*, *Postscripts*, *Strange Horizons*, *Chizine*, and other venues. By day, Will is a psychology professor in the Southeast. We're delighted that by night, he has written a charming tale about childhood in an alternate suburban neighborhood where life is forever changed by the discovery of . . .

# MIDNIGHT BLUE

Will McIntosh

He'd never seen a burgundy before. Kim held it in her lap, tapped it with her finger. She was probably tapping it to bring attention to it, and Jeff didn't want to give her the satisfaction of asking to see it, but he really wanted to see it. Burgundy (Kim had insisted on calling it burgundy red when she showed it at show and tell) was a rare one. Not as rare as a hot pink *Flyer* or a viridian *Better Looking*, but still rare.

A bus roared up, spitting black smoke. It was the seven bus—the Linden Court bus, not his. Kids rushed to line up in front of the big yellow doors as the bus hissed to a stop. A second-grader squealed, shoved a bigger kid with her Partridge Family lunch box because he'd stepped on her foot. All the younger kids seemed to have Partridge Family lunch boxes this year.

"What did you say it did when you've got all three pieces of the charm together?" Jeff asked Kim. He said it casually, like he was just making conversation until his bus came.

"It relaxes time," Kim said. "When you're bored you can make time pass quickly, and when you're having fun you can make time stretch out."

Jeff nodded, tried to look just interested enough to be polite, but no more. What must that be like, to make the hour at church fly by? Or make the school day (except for lunch and recess) pass in an eyeblink? Jeff wondered how fast or slow you could move things along. Could you make it seem like you were eating an ice cream sandwich for six hours? That would be sparkling fine.

"Want to see it?" Kim asked.

"Okay," Jeff said, holding out his hands too eagerly before he remembered himself. Kim handed it to him, looking pleased with herself, the dimples on her round face getting a little deeper.

It was smooth as marble, perfectly round, big as a grapefruit and heavy as a bowling ball. It made Jeff's heart hammer to hold it. The rich red, which hinted at purple while still being certainly red, was so beautiful it seemed impossible, so vivid it made his blue shirt seem like a Polaroid photo left in the sun too long.

"Imagine finding this in the wild? Pushing over a dead tree and seeing it sitting there under the root?" Jeff said.

"Yeah, right," Kim said. "Not likely." She shook her long brown hair back over her shoulder. She did that all day long in class. She thought she was so gorgeous.

A few of the other kids circled around to take a look. Jeff spun it around until he found the hole where it would be fitted to one side of the staff, when someone got the whole charm together.

"Will your father try to get the other two pieces, do you think?" Ricky Adamo asked, reaching to pet it once, probably just so he could say he'd touched one.

"He's only keeping this as an investment," Kim said, holding out her hands to take it back from Jeff, who passed it over, his fingers suddenly feeling much too light. "My father's going to buy me a whole chertreuse to absorb when I'm 18. I'm going to be a doctor."

"He is not," Jeff said. "Most of the chertreuse ones that've been found have already been absorbed. The ones that haven't, your father would have to give your whole house and everything in it just to get one sphere."

"What would you know about it?" Kim said, glaring. "You don't even know what it feels like to absorb one! You've probably never even owned a sphere, let alone absorbed a whole charm."

Cindy Schneider and Donna Ruiz laughed. Ricky laughed too, even though he'd never owned one either.

"I have too owned a sphere," Jeff said. "I've owned dozens."

"Right," Cindy said. "You must keep them under your bed at the Garden Apartments." Everybody laughed, except Ricky, who lived at the Garden Apartments too and couldn't pretend he didn't.

Kim took a pack of Double Bubble out of her bag. She shoved a piece into her mouth dramatically, and chewed. "Mmmm! It's so delicious!" she said. She showed Jeff her teeth and chewed some more. "I'd offer you some, but it would just be wasting it. You couldn't appreciate it the way I do, because you haven't absorbed a sky blue charm."

"Watch this!" Cindy said. She ran onto the lawn in front of the school and spread her arms. Birds landed on them—wrens, bluebirds, blackbirds, finches. "Now just the yellow ones," she said. All but the yellow finches flew off. Four or five more finches landed. One landed on top of her head. "The pretty yellow birds love me." She spun in a circle, her long blonde hair spraying outward. The birds held on, trilling brightly.

"Big whoop," Jeff said, turning back toward the parking lot. Of all the charms that kids at school had, he most wished he had a maroon animal charm. He loved animals, way more than Cindy did. Just the other night

he'd had a dream about it. He dreamt he found all three pieces of an animal charm, in the walls of the old car wash on Samsondale Road. He assembled it, grabbed hold of it, felt the charm go into him, and then he'd gone into the woods and called out, and a bobcat had come to him. The bobcat became his pet and went with him wherever he went. He took it to school, and it slept on the floor next to his desk, and all the other kids watched as he leaned over and rubbed its ears.

When he woke up and realized it was just a dream, an awful wave of disappointment had washed over him. Jeff laid in bed for two hours wishing it hadn't been a dream, until the sun came up and he had to get up for school.

The Dellwood bus came. Kim climbed on holding her sphere, with Cindy and Donna right behind, all of them laughing and jabbering. Jeff sat on the bench next to Ricky.

"I hate those snobs," Ricky said.

"Yeah, me too," Jeff said. Their bus pulled into the parking lot. "They think they're so great."

On the way home the bus driver drove right past their stop. Jeff and a half dozen other kids shouted for her to stop. Brakes squealed; the bus stopped in front of the Shop Rite supermarket, a few hundred yards past the Garden Apartments.

"Sorry," said the bus driver.

"Do we have to walk from here?" David Zimet whined.

"Let the poor bastards walk," Mike Sass yelled from the back of the bus. Jeff could see a couple of the Garden Apartment kids turn and stare at Mike. If Mike was smaller, someone would go back there and beat the hell out of him, but he was big and fat. He threw the shot put on the track team.

Jeff's mom came home at five, clutching a brown bag of groceries in one arm. Jeff clicked off the TV; Fred Flintstone shrank to a dot and disappeared. While mom put the groceries away (looked like they were having cheeseburgers for dinner) he told her about the burgundy sphere Kim had brought to school.

"Your grandmother absorbed a burgundy sphere. She used to say that was one of her favorite powers."

"What does it feel like, when you absorb one?" Jeff asked.

"It's kind of hard to explain," mom said. "There's definitely something there that wasn't before—you feel that right away."

"Can you feel something alive going into you? Is it scary?"

"I guess it should be, because you know something living is going into you when you absorb the charm, and it's going to stay there for the rest of your life. And you can sort of feel them."

"I always picture butterflies flying around inside you, and they're the same color as the charm."

"It's more subtle, though. When I close my eyes," she closed them, scrunched her eyelids in concentration, "I can sense that there are little blips there, watching. But they're so quiet, and so harmless. They're just hitching a ride because they don't have their own bodies. They just want to live."

"Symbiotes," Jeff said, feeling a little proud that he knew the complex word. Mrs. Peters had taught it to them in science.

"That's right, Jeff, very good."

He went and sat at the old piano while mom looked at the mail. He plunked a few keys. He liked the black keys—they sounded like the music from *The Mummy* and *Dracula*.

"How old were you when you got the Musical charm?" he called to mom.

"Fifteen," she said. "I found one of the spheres, wedged between two big branches of a tree, in the woods behind grandma and grandpa's cottage in Rhinebeck. Grandpa had to chop it free with an ax. I was hopping up and down, calling up to him to be careful." She sat down next to Jeff; he scooted over to give her room. She played *Moon River* softly. "I went to a swap meet the next day and traded just about every piece I had for the staff and other sphere to complete the charm. I knew tea green was the musical charm, and the moment I saw that sphere up there in that tree, I knew I'd do anything to finish it. That was the most exciting thing that ever happened to me."

"What others did you find when you were a kid?"

Mom frowned, thinking. "An orange Pretty Handwriting. A purple More Outgoing. I found two blue-grey See in the Dark spheres, so I traded for the staff—that's the only reason it's one of the powers I have." She shrugged. "Nothing that rare. The Musical was my best find."

"I wish you could still find spheres and staffs in the wild now." Freddy King had found a rust brown Good With Machines staff last summer, under the floor at his grandfather's hardware store. That had been something.

"I know. Remember the story I told you that your grandfather told me, about the day they first appeared? Can you imagine, waking up one morning and they're everywhere? Hidden in drain pipes and under porch steps, like Easter eggs."

"That would be great," Jeff said. "It's not fair that people used so many of them up. How many did grandpa absorb?"

"Oh, boy. I don't know, maybe a dozen? He had Better Looking, Sense of Smell, Taste, Singing, Sensing Patterns. He didn't have any of the rare ones, but he had a lot. Everyone did back then." Mom finished the song with a flourish down the keys. "I wish I could afford to buy you a charm. Your twelfth birthday is in a couple of months—I wish I could get you one, but I just can't. They're so expensive."

Jeff just nodded. He wished it too, but it wasn't mom's fault.

"What time do you want to eat?" she asked.

"Six-thirty?" he said, standing. "I'm gonna go outside for a while, see if David's home."

"See you around six-thirty," mom said.

Jeff ran over to David's, wishing he could absorb a mustard Fast Runner. David opened the door munching a hot dog. Jeff had no idea how he stayed so skinny. Skinnybones Jones was always eating.

"Want to go skin-fishing?" Jeff said.

David shrugged. "Okay." He pushed the end of the hot dog into his mouth, wiped a streak of mustard from his mouth, held up a finger and ran to get his old sneakers. He put them on outside, on the stoop.

"My mother called the school and complained about the bus driver leaving us off in front of Shop Rite," David said.

"What did they say?"

"They said they'd make sure it doesn't happen again."

Jeff bet they would, too. David's mom had a screechy voice that made it sound like she was yelling even when she was just asking if you wanted milk with your peanut butter and jelly sandwich. When she was really mad, she could rip your eardrums.

They stood on the edge of the brook that ran alongside the Garden Apartments. On the other side of the brook cars whizzed by on Route 304. Jeff counted seven carp swimming languidly among the rocks. There were probably more in the tunnel, where the brook ran under Stephens Road before it continued along beside the Shop Rite parking lot. That's where the big ones usually were—in the tunnel.

Jeff pulled off his shoes and socks and waded into the cold water, stepping carefully, watching for broken glass. He loved to feel the power of the water pushing against his calves. The carp whizzed away, toward the tunnel. David waded in after him in his old sneakers. He didn't like the slippery feel of the algae that grew on the rocks.

They moved slowly, like David's cat moved on the lawn when it was after a bird, careful to avoid letting their shadows pass over the carp. Jeff got behind a pretty big one, eased his hands into the water so they didn't cause even a ripple, then stayed frozen like that, bent over, letting his hands drift toward the carp. When his hands were on either side of it, he closed in slowly, slowly . . . then grabbed it.

The carp thrashed, surging forward, but Jeff held tight, pulling it out of the water and holding it up triumphantly. He felt the muscles in its sides flex powerfully as it struggled.

"Let me see!" David said, wading over. He held the tail straight, looked it over. "I'd say a six."

"Okay," Jeff said. He thought it was more like a seven. He spread his legs, tossed the carp underhanded, up and away. It hit the water with a splash and swam away, flashing silver in the sunlight.

"Let's try the tunnel," Jeff said, leading the way. "Maybe the ten is in there." He'd almost caught the ten a couple of weeks ago; he'd had it by the tail, but it yanked free.

Jeff ducked his head, went under the bridge, feeling the little thrill of fear he always got as he shifted from sunlight into the tunnel's semi-darkness. It was cooler in there, and damp. The concrete overhead rumbled each time a car passed. His eyes adjusted to the shadows, and now he could see three carp drifting among a cluster of rocks near the tunnel wall. Jeff crept over, with David right beside him. The ten wasn't there, but there was a big one—a definite eight even by David's standards. As they closed in on the eight, it wagged its tail, drifted closer to the wall, then closer. It disappeared behind a big rock pressed close to the wall.

"Damn!" David said. "That was a big one."

Jeff tried to flush it out, but the crack between the wall and the rock was too small. "Come on, let's see if we can move it." He reached along the side of the rock, found a good handhold. David grasped it on the other

side. They counted three, and pulled. The tunnel echoed with their grunts. Even in the semi-darkness, Jeff could see David's face grow beet-red. Jeff planted one foot on the side of the tunnel, and pulled harder. The huge rock shifted, kicking up mud into the water.

"Pull!" Jeff groaned. David grunted louder, a long, guttural howl, his eyes squeezed shut.

All at once the rock tumbled over with a splash. Jeff and David whooped, exchanged a high five. They bent, hands on knees, straining to spot the eight. The water was cloudy, but the mud settled quickly with the help of the current, exposing a black fissure at the base of the wall.

"The eight must have gone in there," David said.

"I bet that's where the ten hides, too!" Jeff said. He bent on one knee; the water soaked the end of his shorts, but he didn't care. He tried to peer into the crack. It was too dark.

"We could bring a flashlight," David suggested.

Jeff looked at David. "Or one of us could stick a hand in there and feel around." David broke into a grin, shaking his head no.

Jeff burst out laughing. "I know. It would be creepy to stick your hand in that hole, not knowing what's inside," Jeff said. He took another look in the hole, looked back at David.

"What?" David said.

"You dare me?" Jeff said.

David let loose with one of his wicked laughs, the laugh he laughed when they were thinking of doing something that might get them in trouble. "No way. You wouldn't."

"You dare me?" Jeff said again.

David looked at the hole. "Yeah, I dare you."

Jeff rubbed his hands together. "Okay. I'm gonna do it." He got himself positioned close to the opening, reached forward, stopped with his fingers just inside the dark opening. He laughed. "That's creepy! Man."

He took a deep breath. "Okay, I'm really gonna do it." He stuck his hand into the hole. "It's deep," he said, reaching his arm in further and further, to the elbow, then to the bicep, his heart pounding. He felt a jagged stone, and mud, reached in until his shoulder was pressed against the concrete wall. He felt around, bracing himself, not wanting to be startled if his hand hit one of the carp. His fingers brushed something smooth. He went back, waggled his fingers until they hit the smooth thing again. It wasn't a rock.

"What is this?" Jeff said. He pushed his shoulder deeper into the opening, pedaling his fingers, looking for purchase.

"Be careful, you'll get your arm stuck!" David said, hovering over him.

"There's something... Oh!" He knew what it was. Or he thought he knew. He hoped. "Please, oh please, oh please," he said as he dug the smooth ball out of the mud.

"What? What is it?" David said.

He felt it break free, made sure he had it firmly in his hand, afraid it would drift away, afraid it would be gone like the bobcat in his dream. He paused a moment, wondering if this was a dream, felt the cool water soaking his thighs, his ribs, the seat of his pants, confirming it wasn't. He pulled the sphere out of the hole.

"Oh my god!" David said.

Jeff held it close to his face. It was . . . navy blue? It was hard to tell in the tunnel. Navy blue was Athletic. Or was it Good Whistler? Good Whistler. Not rare, but still, it was a sphere. He'd found a sphere in the wild. Jeff sloshed out of the tunnel, into daylight. He rinsed the sphere in the stream, spinning it around, rubbing the caked mud off the bottom half.

"What color is it?" David said, leaning in. "Navy blue? That's Good Whistler, isn't it? I can't believe you found one. I can't believe it."

Jeff looked close. "Is it navy blue? It's almost. But isn't it a little darker than navy? And a little purpler?" He'd seen many navy blues on display at the charm store.

"Let me see," David said. Jeff handed it to him. David held it up to the light, turned his head from side to side. "It's got to be navy. What other color would it be? It's not plum. It's got to be navy." David handed it back to him, let out a squeal of ragged excitement.

They charged up the bank and ran home, with Jeff holding the sphere high, shouting "look what I found!" to everyone they passed. He charged up the staircase to his apartment, shouting for his mom at the top of his lungs.

She burst through the door, looking alarmed, then relaxed when she saw he was okay. "I thought you were hurt!" she said.

"Look! Look what I found!" He held out the sphere. Mom's eyes got big.

"Oh my god!" She took it, held it cradled in both hands. "Where did you find it?"

"In the brook tunnel," David said.

Mrs. Massey, the old lady from the apartment across the hall, came out, brushing aside a fallen pizza parlor flyer with her foot. "Oh, dear," she said. "What have you got there?"

"Is it navy blue?" mom asked, her eyebrows knotting.

"I don't know," Jeff said. "I don't think it is."

"But what is it then?" mom said.

"I don't know," Jeff said.

"It's got to be navy blue," David said.

Mrs. Massey squinted at it. "I don't think that's navy."

"Hold on," Mom said. She disappeared into the house, came out carrying her keys. "The charm store is open until seven. They'll know."

"Can I come with you?" David asked.

"Go tell your mother where you're going first," Mom said. David took off down the stairs, his bony knees bobbing.

He was standing by their car, breathing hard, by the time Jeff and his mom got down the stairs and out the door. David was fast.

The bell jingled on the charm store door as Jeff pushed it open. He approached the counter with David at his elbow. His mom hung back by the door. The charm guy was at the far end, unpacking staffs from a long box, a cigarette in his mouth.

"Excuse me," Jeff said.

The charm guy pulled the cigarette out of his mouth and exhaled smoke. "What can I do for you, sport?"

"Could you tell me what color this sphere is?" He held it up.

The charm guy opened his mouth to answer, closed it. He squinted at the sphere, looking puzzled. "Let me see it."

The guy looked at it closely, scratched at it with a fingernail, then put it down.

"You found this in the wild?" he asked.

"Yup. Underwater, in a tunnel," Jeff said.

The guy squatted behind the counter, brought out a big spiral-bound notebook and opened it on the counter. The laminated pages had rows and rows of colors. With practiced ease he rolled Jeff's sphere across the rows on a page of blues, testing it against the different shades and hues. He stopped on one that matched perfectly, and read the text below it.

"Is it a good one?" David asked.

The guy nodded. "Yeah, it's a good one." He looked up at Jeff. "Tell you what. Give you four hundred for it."

His mom and David both screamed with excitement. Jeff couldn't speak. His heart was hammering, the words echoing over and over in his head. *Give you four hundred for it.*

Mom grabbed his shoulders and shook them. "I can't believe it. I just can't believe it."

"What does it do?" Jeff asked the charm guy.

He retrieved his cigarette, took a puff. His hand was shaking. "I don't know," he said. Smoke drifted out of his nose.

Jeff looked at his mom. He didn't know? That's how he made his living.

"What do you mean? What does it say in the book?" Jeff asked.

"It doesn't say. Look, I'll give you five hundred," he said. "That's a very fair price."

"Can we look at the book?" his mom asked.

The guy swept the book off the counter. "This is dealer-only information. I can't share it with anyone. But I can tell you it's rare, and I'm offering you a fair price for it."

Jeff took the sphere off the counter. "I'm not ready to sell it yet. I just wanted to know what color it was." He turned toward the door.

"Hold on," the charm guy said. "Look, I'm not supposed to share dealer information with you, but I'm going to do you a favor." He raised his finger. "I hope you'll remember that when you decide to sell it."

Jeff nodded.

"What you have here is a midnight blue. I don't know what it does because nobody knows what it does, because until now there was only one known sphere in existence, to go along with one staff. You found the rarest sphere on Earth."

Jeff looked at his mom. Her mouth was open wide, her face frozen. David looked like he just stuck his finger in a light socket.

They all started to jump up and down and scream at the same time.

They thanked the charm guy and ran to the car. Jeff couldn't wait to tell every single person he knew.

Jeff raised his hand as soon as Mrs. Pardo settled the class down. He begged her to let him do a Show and Tell, even though they weren't supposed to have Show and Tell today. After a few heartfelt "pleases," she re-

lented. Jeff sprung from his desk and went to the front of the class. He leaned against the blackboard, hands behind his back and began to tell them about the sphere he found.

"Where is it?" Kim asked from her seat in the front row.

"My mom brought it to the bank this morning and put it in a safe deposit box. She said it was too valuable for me to bring to school."

"Yeah, right," Cindy said. "You're such a liar."

"I am not!" Jeff said. "I found a Midnight Blue, the rarest sphere on Earth! It's mine, and it's in the bank."

"Jeff, are you sure?" Mrs. Pardo said. "I'm sure you're not lying," she shot Cindy a look, "but maybe you're mistaken about the color?"

There was a knock on the classroom door. Mr. Mannino, the principal, stepped into the classroom in his white shoes. He always wore white shoes. "Mrs. Pardo, can I see Jeff Green for a minute, please?"

Jeff headed for the door.

"I understand you found something pretty exciting yesterday," Mr. Mannino said.

"That's right," Jeff said. "A midnight blue." He glanced at Cindy and Kim. He wanted to drink in this moment. Both of them were staring at their desks, trying not to look jealous.

"That's marvelous," Mr. Mannino said. Jeff followed Mr. Mannino down the hall, not sure what to say. He'd never talked to the principal before; he was surprised Mannino knew what he looked like.

"Your mom is here to get you," Mr. Mannino said. "Some people want to talk to you." Mannino looked at Jeff, smiled. "Do you realize what you've got?"

"I don't know. I guess so." They passed a water fountain. Jeff was dying to get a drink, but felt funny about making the principal wait.

He spotted his mom through the glass wall of the office. She waved, met him at the door. She gave him a big hug.

"The phone's been ringing off the hook since eight-thirty," she said. "A man from the *New York Times* wants to interview you, and a girl from *The Journal News*. And a collector called. He wants to buy the sphere, he said he'll make you a very good offer." She squeezed Jeff's hand. "This is so exciting. Oh—" she pulled a piece of yellow paper out of her purse, "and you got a telegram."

"A telegram," Mr. Mannino said. "Wow!"

Jeff looked at the slip of paper.

*Very interested in making offer on your sphere. DO NOT SELL before talking to me! Carl Cornelius. 011-221-343-9988. Call me collect.*

There was a TV news van waiting outside their apartment. Jeff answered questions into a microphone with a camera pointed at him and the sphere his mom had retrieved from the safe deposit box, then went upstairs to do interviews with the newspaper reporters. He had pictured the *New York Times* guy wearing a suit with a fedora, but the guy had long red hair and a beard. The girl from the local *Journal News* was in her twenties and pretty, with short brown hair and big round eyes. Jeff felt a little tongue-tied during that interview. The phone rang the whole time. Mom took messages. After the girl from the *Journal News* left, Jeff

told his mom he wanted to go to his room for a while before he started calling people back. His head was spinning; he needed time to think.

He settled into the stuffed chair by the window—his favorite spot. He put the sphere in his lap, set aside the book he'd checked out of the school library before coming home. His baseball cards—all of his best Mets—were propped along the paint-chipped window sill, next to a stack of Marvel comics and an old-fashioned photo of his grandfather singing in a bar, his arms spread and his face pointed toward the ceiling. Everyone got to have powers of some sort back then. Now only rich people did.

He opened the book, *Charm Champs*, and leafed through, reading the picture captions. Only twenty-seven complete hot pink Flyers had ever been found, and all but two had now been absorbed. Eighteen of the people who had absorbed them were dead. There was a picture of one of the guys who was still alive—a billionaire who owned an oil company, who also had Skin That's Hard to Puncture, Dulled Pain, Enhanced Sight, Taste, and Smell, and See in the Dark. The guy had quit his oil business and flew around rescuing people all day, like a superhero.

Jeff picked up his sphere, ran his thumb along the smooth curve. What did it do, he wondered? Usually the rarer the charm, the cooler the power, so what power would you get from the rarest charm of all? Would you live forever, or at least a very long time? Or cure sick people just by touching them?

Why did rich people always get to absorb them? The Cindys and Kims and their parents, who spent their lives rubbing it in that they had powers and you didn't. It wasn't fair. Maybe he should leave his sphere in the safe deposit box, and once he was out of school he would work hard and save as much as he could, until he had enough money to buy the other two parts of the charm. Why shouldn't he get to have a power?

If he sold the sphere, he'd have enough money to buy a few powers. But not the midnight blue power. Not the best power in the world.

Even if he never got the other two parts of the Midnight Blue charm, if he kept it, there would always be something special in his life. He would be the guy who owned the midnight blue. Maybe he could be on the Johnny Carson show, and tell the story of how he found it while Johnny held it.

He put the book on his bed and went back into the living room.

"Mom? What if I decided not to sell it? What if I held on to it for a while?"

She was making egg salad for dinner. She stopped, put down the fork. "It's up to you, Jeff. You found it, and no one can tell you what to do with it."

He thought about that. "But if you wanted me to sell it, I would."

"I want you to do whatever makes you happy. If you decide to keep it, you can always sell it later." She spooned a dollop of mayonnaise into the egg salad. "But I think you should at least hear what these people are offering, so you know what your options are."

"True." Jeff glanced at the kitchen clock. School would be out in twenty minutes. "I'll call them back tonight after dinner."

He left the sphere with his mom so she could return it to the safe deposit box, then went outside and sat on the stoop until the bus pulled up.

"Hey, there's Jeff!" Ricky shouted. "Hey, Jeff!" Everyone headed toward him.

They asked him how much he was going to get for the sphere, and if he was going to be on TV, and where he found it, and if he would give them some money. Jeff felt like a movie star.

"Show us where you found it. Do you think there might be more in there?" Craig Alemi said. Craig was in fifth grade.

"I felt around pretty good in there—I don't think there are any more. But I'll show you the spot." Jeff stood, brushed off the seat of his pants.

"Look!" David said, pointing in the air.

A man flew by, skimming the treetops.

Jeff had never seen a person flying before, except on TV. What was weird about it was that he made no sound at all; he just drifted by, passing over the parking lot until he disappeared over the rooftops.

"Wow. Cool," David said.

"He must be looking for you, Jeff," Ricky said.

"Me?" Jeff said. "Why?" Then it fell into place. If the guy could fly, he was rich. He was here to buy the sphere. Of course. Jeff's heart began to thud.

A moment later, the guy appeared again, slowed, landed in the grass right beside them. Jeff recognized him—the billionaire in *Charm Champs* who had absorbed all those great charms. He was tall, with blonde hair (neatly parted despite the flying), an overly square jaw, and big white teeth. It wasn't listed in the book, but Jeff would bet that he'd absorbed a viridian Better Looking.

"Would one of you boys be Jeff Green?" he said.

Three or four kids pointed at Jeff. They stared at the flying man like he was Mickey Mantle.

"Hello, Jeff. I'm Carl Cornelius. I sent you a telegram this morning?" He was wearing a shiny tan jumpsuit with a "V" shaped collar. It wasn't a superhero costume, but it wasn't what men around Jeff's town wore, either.

"Oh, yeah." Jeff pulled the crumpled telegram out of his pocket and held it up. It would never have occurred to him in a million years that it was from the guy in the book. He was uneasy about this. He didn't want to be intimidated into selling the sphere, and this man seemed like the kind who could be pushy.

"Do you have any other powers?" Ricky asked.

"I sure do," Cornelius said. He looked around, picked up a bottle lying near the stoop, shattered it against the apartment building's brick wall and retrieved a jagged shard of glass. "Careful now," he said, handing it to Ricky.

Cornelius held out his arm, palm up. "Go ahead and try to cut me with it."

Ricky didn't hesitate—he dragged the nasty-looking piece of broken glass across Cornelius's forearm.

It left a little pink mark, nothing more. The kids oooh'd and aaah'd.

"Can I have a ride?" David asked.

Cornelius cocked his head and considered. "Maybe I have time for one. Then I've got business to discuss with my friend Jeff here." He lifted David under the arms and flew straight up, then around the band of pine trees out near Stephens Road. David was laughing his "this is fun but

scary" laugh, usually reserved for when the carnival hit town and for sledding on the steep part of Lucille Hill.

Cornelius put David down, ruffled his hair, and turned to the kids congregated on the sidewalk. There were about twenty of them now, kindergarteners to high schoolers. "That's all for now, kids." A series of disappointed groans lit the air. Cornelius raised his hands. "I may have time for a few more rides after I've spoken with Jeff." He turned to Jeff. "Can we talk inside?"

"Sure," Jeff said. He led him into the hallway.

"I just flew in from Ireland," Cornelius said as they climbed the stairs. "When you didn't respond to my telegram, I thought it best that we talk face to face."

"I don't mind talking, but I don't think I want to sell the sphere," Jeff said. "No offense, but I think I should let you know that now."

Jeff led Cornelius into their apartment, introduced him to his mother. Cornelius didn't want coffee. The three of them sat in the living room, Jeff and his mom on the couch and Cornelius in the rocker across from them.

Cornelius and his mom talked for a few minutes about raising kids, then Cornelius remarked that Jeff seemed like a terrific boy, and Jeff's mom agreed that he was. Then Cornelius turned to Jeff.

"So Jeff, you were saying outside that you weren't sure you wanted to sell the sphere. Can you tell me why?"

Jeff looked at his hands. It was unpleasant to look Cornelius in the eye—his eyes drilled right into you. "I don't know, I just want to hold on to it." He shrugged. "Maybe one day I'll have enough to buy the whole charm."

"How old are you, Jeff?"

"I'll be twelve in June."

"The thing is, Jeff, I own the other two pieces of that charm. I can't foresee a situation where I would ever sell them." Cornelius looked at his mom. "Mrs. Green, would you mind if I talked to your son alone?"

Jeff's mom looked at Jeff. He shrugged. He didn't want her to leave, but he felt uneasy saying so.

"I'll be in the kitchen. Jeff, you call me if you want me." Jeff nodded, and his mom went the ten steps into the kitchen area where she could probably still hear what they were saying.

"Jeff, I'm forty-four. That's only about thirty years older than you, and I plan to live a long time."

Jeff wondered if Cornelius somehow already knew what the charm did. It probably did make you live longer.

"So if you don't sell me the sphere, it's not going to do you much good. And I guarantee you, nobody is going to offer you more for that charm than me. Do you believe that, Jeff?"

"Yes, I do," Jeff said.

"Let me make you an offer. It's the best offer I'm ever going to make to you. Do you believe me when I say that?"

Jeff nodded.

"Good. If you turn it down and I fly away, I won't be as generous next time. And there will be a next time, I promise you that. That sphere isn't doing you and your mom any good sitting in a safe deposit box." Cornelius

leaned in close and lowered his voice. "Jeff, have you thought about your mom? Wouldn't it be nice if she didn't have to work as a secretary any more? Wouldn't you like to buy her a little store or something?"

"A store?" Jeff said.

"Mmm hmm. That's right Jeff, a little store on Main Street. And a house. You could get out of these apartments. You could have a little pond in the back yard. Buy yourself a few nice charms. Athletic. Enhanced Vision. Maybe an animal charm?"

Jeff's head was spinning. How much would all of that cost? He had no idea, but it had to be tens of thousands of dollars.

"How much money are you talking about?" Jeff asked.

Cornelius smiled. "Now you're talking my language, Jeff." He kept his voice low. In the kitchen, mom was sort of stacking dishes, but mostly just standing there with a dish towel. "Here's my offer, and keep in mind, it's non-negotiable: Seven hundred thousand dollars."

The world disappeared for a moment. Everything broke into a million little grey dots and went black, like they did on a TV screen. Then they pulled back together and Jeff was still sitting in his living room, across from Mr. Cornelius. His hands were tingling, his fingertips curling involuntarily.

"A million," Jeff said through numb lips.

Cornelius let out a warm, easy laugh. "You're something else, you know that? I offer you a fortune, tell you it's my best offer, and you counter. You're a smart kid, Jeff." He clapped Jeff on the knee. "Very good. No one's first offer is ever their best. Tell you what, I'll meet you half way: eight-fifty."

That was probably more money than Kim and Cindy's parents had combined. He was rich, he and his mom.

"You've got a deal," Jeff said.

Cornelius held out his hand. Jeff shook it.

"I can arrange to have a cashier's check by the end of the day," Cornelius said. "Can you get your mom to take you to the bank to withdraw the sphere?"

"Sure," Jeff said.

Cornelius stood. "Your son drives a hard bargain, Mrs. Green, but I think we've finally made a deal," he said. "I'll be back at six to take care of the details, if that's all right with you?"

Jeff's mom said it was. They walked him to the door.

"Can I ask you for one more thing?" Jeff said at the door.

"As long as it doesn't cost me any more money," Cornelius said, laughing.

"No, I'd just like to be there when you absorb the charm. I want to see what it does."

Cornelius nodded. "Fair enough."

"How much?" His mom asked as soon as she shut the door.

Jeff grinned. "You're not going to believe it."

"More than ten thousand?"

He nodded. His mom gasped.

"Twenty?" she said.

"A little higher," he said.

"Twenty-five?"

He pointed his thumb in the air.

"Higher? Tell me!"

He paused. Mom waggled her fists impatiently. "Eight. Hundred. And Fifty. *Thousand*. Dollars."

Jeff watched his mom's eyes get bigger and bigger. She screamed, and grabbed him, and spun him in a circle.

"We're rich!" Jeff said.

Jeff pressed the sphere against his cheek, then kissed it. It was hard to believe he'd found it only yesterday. It hurt to give it up, even for a fortune. He'd be rich, but not special. You don't get on the Johnny Carson show for being rich. Cornelius was the one who'd get to be on Carson now.

He heard footsteps on the stairs, went and opened the door. Cornelius was carrying a long case. He was with another man who was carrying a folder.

The man was a lawyer. He had Jeff and his mom and Mr. Cornelius sign some papers, then he handed Jeff a check, and Jeff gave Cornelius the midnight blue sphere. Cornelius accepted it with two hands and a little bow, like Jeff was giving him communion or something.

"Money means nothing to me any more," he said, gazing at the sphere. "I live for these, for the powers they give. Did you know I have more rare powers than anyone on Earth?" No one answered, but Cornelius didn't seem to be looking for an answer. He reached for his case. "It's time to see what we have."

"Do you know what it does?" Jeff asked.

"I've no idea," Cornelius said. He took out the other two pieces of the charm. He fitted Jeff's sphere onto one end of the staff, then the other sphere onto the other end. "Why don't we find out."

He took a deep breath, closed his eyes, and grasped the staff with both hands.

Nobody moved. Nobody even breathed. Outside, a couple of kids were shouting. A dog barked in the distance.

Cornelius frowned, opened his eyes. "Strange. I don't feel what I usually feel."

"It feels different?" Jeff said.

"I don't feel anything. I don't sense the new charm inside me."

A dud. Jeff wasn't going to say it out loud. Was it possible? Duds were always commons; none of the rare ones were duds.

They waited. There was some sort of commotion outside—people shouting back and forth.

"Maybe you just don't feel it with this one," mom said.

"Maybe," Cornelius said.

Jeff couldn't help but hope that it was a dud. He folded the check in half and slid it into his back pocket. As they used to say when he was little, no backsies. A deal was a deal.

Jeff's mom looked toward the window. "What's going on out there?"

It was getting loud. People were shouting and screaming, like there was a fire or something, only they didn't sound scared exactly. Jeff heard a woman shout "On the roof!" A kid was shouting something Jeff couldn't understand—it sounded like Ricky.

Jeff went to the window and lifted the blind.

There were twenty or thirty people outside in the fading light. Some were running, some were on their knees peering underneath cars in the parking lot. Jeff recognized Ricky's black-sneakered feet poking out of the hedges. Sherry Underwood was cradling something, running toward the door of her building. She shifted her load to the other hand to open the door, and Jeff caught a glimpse of what it was: two spheres. It was too dark to tell what colors they were.

"I found one!" Ricky shouted. He clutched a sphere, maybe a burnt orange Laugh Easier, over his head.

"Oh my god," Jeff's mom said, peering over his shoulder. "What's going on? Where did those come from?"

Cornelius edged in, shifting to see. He gasped. Jeff put his hand in his back pocket, over the check.

"I guess we know what the midnight blue does," Jeff said. He stepped away from the window. He was dying to get outside, but he didn't want to be rude.

"I guess we do," Cornelius's lawyer said, staring out the window. "I guess we do."

"Reproduction," Cornelius said. He sounded like someone had just died.

The rarer ones would be better hidden. Jeff shifted from foot to foot, impatient, running through likely hiding places that other people wouldn't think of. It would be pitch dark in half an hour—he needed to bring a flashlight.

"I'm gonna go outside and take a look," Jeff said. He held out his hand. "Mr. Cornelius, it was good doing business with you."

Cornelius shook his hand. His forehead was sweating. "I wish I could say the same."

Jeff grabbed the flashlight in the kitchen drawer, bolted out the door while mom said goodbye to Cornelius and his lawyer. "I'll be home late, mom," he called as he closed the door behind him and hit the stairs running.

Things were fair again. Jeff threw open the hall door and drank in the waning light, the chirp of crickets. He leaped off the stoop. One day, he was sure, he would fly off it. ○

## SCREAMS

**The aliens came marketing Anti-Wrinkle Scream.**

**Actually they resembled Edvard Munch's Screamer:**

**long-fingered, bald, a bit like the mythical Greys**

**except that these aliens' mouths weren't thin pursed slashes**

**but full and flexible; and their eyes weren't big and slanted**

**but round, just a bit bigger than ours.**

Unlike Munch's screamer, these guys didn't dress in shapeless black but went nearly nude except for a pouch and a tool-belt, the better to display their skin so shiny and smooth.

"Anti-wrinkles cream?" they were asked.

"We already have hundreds of those!

The summit of anti-ageing technology."

"No," the aliens replied, "anti-wrinkle scream."

They explained that particular words in their language, screamed at an exact pitch and volume, were efficacious for wrinkles on different areas of the face and the body—a bit like acoustic acupuncture. Oh the power of sound!

They would teach these sounds to paying customers female and male, and wished to be paid in emeralds—they'd been Googling from orbit and admired pics of our gems grass-green due to chromium content although any sort from light to deep green would do fine, though not synthetic emeralds with a veil-like hue.

People said: "We know about Primal Scream, the psychotherapy of Letting It All Hang Out. But this sounds new!" Soon prosperous women (and men too) were learning to shriek and yes, their faces grew quite girl-like (or boy-like) and other important parts of them too. Web conmen offered cheap recorded screams for download to iPods.

By the time the Screamer ship left, loaded with emeralds, a tenth of the world was shrieking and slowly going deaf.

—Ian Watson



# USURPERS

Derek Zumsteg

Derek Zumsteg lives in a Seattle suburb with his patient wife and builds software for Expedia's European group. Derek is a successful sports writer whose work includes *The Cheater's Guide to Baseball* (Houghton Mifflin, April 2007) and an essay "Bugs Bunny, Greatest Banned Player Ever," which was selected for *Best American Sports Writing 2007*. He's also a co-founder of the USS Mariner baseball blog. Recently, though, he's returned to his first love—writing SF. He attended Clarion West and one of his short pieces ran on Escape Pod, but the following piece is his first pro-fiction sale. Of "Usurpers," Derek says, "I ran cross-country in high school and know a couple tricks not in this story." These days he bikes.

Out of the bus and into the park. Teenage cattle mill in the drizzle, making friendly-hostile noises at each other. Butting heads. Slapping butts. King walks among the herd. Sniffing for the knock-offs, scent of new car on sixteenth birthday, looking for the bleached teeth and perfect, acne-free faces. King's legs feel springy, light, fresh. They want to run. The bunkered computer gave him two days off and it's been all King could do to not sprint down hallways, race cars.

King spots a knock-off cluster, glowing sunny in the rain, too fit, perfectly proportioned. Tear off some burnished bronze, never-burning skin. Shove it under a microscope, see the designer signature, Chinese characters like tattoos on the necks of college girls.

Fifty kids fifteen to eighteen stamp their feet. Stretch. Check each other out. Hopping in place to stay loose. Bitching about the bus ride over. Vinyl benches tied up their back if they're from a poor zip. Those boys recognize King, stop him as he passes. Exchange complicated handshakes. Wish him luck and mean it. Tell him to fuck shit up and mean it.

King seeks someone he hates for pre-race greeting and unpleasanties. Steve. Rich white kid. Last year, Steve ranked twelfth at best all year, after he placed second to King in semis. This year he ran first. First. First. King? Unranked.

Unbelievable.

Unfuckingacceptable.

All ten ranked cross-country runners this season took family trips to China after school let out last year. When they returned and established dominance, King took the Asics guy up on his offer to join the experimental training program. Found himself running by himself, following daily instructions from an email address. King knows there's a machine on the other end, some oracle in some data center chewing on his performance data full time. Responds only to email, immediately, all hours.

No vacation this year for King. Every day, woke early for the morning run. Usually intervals. Then a nap and back out for the longer afternoon run.

No job. No more smoking up, ever. No girls, but after the losses, no fans anyway. King's only steady supporter one girl from pep. Still brought cookies, taped cheesy construction paper running shoes on King's locker on meet days. Did not go unnoticed. King reserved particular spots in future court for subjects loyal during trying times.

Despite newly created competition, King still made state. Represents the worst school in a shithole of a district. Gerrymandered to include all the cheap housing and a commercial wasteland, collapsed strip malls occupied by cut-cut-rate pizza delivery outlets, stores selling all products at fixed prices.

King finds the Kentwood team. Steve.

Common King adjectives from clippings, one year ago: *athletic, fiery, explosive, gifted, temperamental, powerful, intuitive*

Common Steve adjectives from this year's clippings: *handsome, self-effacing, dedicated, hard-working, outgoing, forthright, competitive, team leader*

Unused King adjectives: *black, African-American*

Unused Steve adjectives: *Caucasian, white, gene doper*

The Kentwood team orbits Steve. They wear microfiber jerseys, custom-fitted Nikes that suit their running style, pronation, whatever, all in school colors.

King's shoes match theirs. King took them from the Kentwood locker room early in the season while they were in the shower tugging each other and joking: Ha ha that's what it'd be like if we were gay. Had time to find the right size. Not even stealing. It's all King's property. Reserves the right to revoke grants.

They do not notice that King wears the same brand and model of shoes. After reclamation, King did some detail work with a permanent art marker and swapped out white laces for bright gold ones. Plus they are stupid. Makes King smile. Their school district rated the finest. Line shows in property values. Not that King has a house. Lives in an apartment, White Mike the drug dealer in the unit below.

King excuses himself through the cordon, makes eye contact. King switches his voice. Friendly face.

"Hey Steve, how are you? Nice to see you again."

Steve wants to be the sportsman, magnanimous, rich man's burden. Pulls the oxygen mask down to give King the winner nod.

"Hey, King, whassup?" Draws out the "ss." King keeps his smile fixed.

Steve sticks out an open hand. They clasp, shake once. Firm, not aggressive. No multi-stage. Obviously. Maintain voice.

"I missed you at the Ocean Shores invite," King says. "I heard you took a family vacation."

*Steve's family frequently mentioned in stories. Of the Boston Prescotts. Implies good breeding, societal pre-approval.*

"Yeah, yeah, took a whole month. Heard you did well at Ocean Shores. Congratulations."

King won Ocean Shores Invitational. Early summer, rich kids still across the Pacific. Beautiful race. King now looks at the trophy and tastes ash.

"How did you like China?"

"The Great Wall was great."

"Did you all go over together?" Loaded question.

Steve bites, starts to list off the other now-ranked runners who went with him. King should have asked for account numbers, PINS.

"Cool, cool, sounds like fun," King says.

"Yeah, yeah," Steve says, nodding head. He kicks at the ground with toe of one foot.

Embarrassment. Does he feel shame? King decides to stick the knife.

"Then lemme ask you," King says. "If you guys are all the same genome, when you jerk each other off in the showers, is that incest?"

Steve twitches. Faces sour.

"Is that a joke?" Steve says.

"Incest isn't funny." King pauses. "Was that over your heads? Really?" King shakes head, sighs in resignation. Fuck it. "Steve, my man, when they went in there, did they fix that shrinky-dick problem of yours?"

Steve flushes red. Can't go wrong with dick insults.

"Of course, right, daddy's got to look out, conceal the family shame." King keeps pushing. Steve's blood rich in testosterone, all of it natural, generated by reprogrammed organs. Rage twitches across the shoulders, neck. King circles back to yo mama. "Your mom check out the package, make sure it's all working?" Not a tenth of a second before control breaks. Steve yells incoherently, head shaking. Arms come up. Yes.

Steve pushes King with both hands. King forced two quick steps back, stays up. Wanted the punch, Steve thrown out. Instead it's a scrum, everyone yells at everyone. Longshot hope that Steve's thick blood and the pressure spike combine for a clot, a heart attack, a stroke.

No such luck. King to the line. Some shoving, elbow testing. Cameras though. Deters false starts. Gray hair with the starter pistol, jacket. Annoyed expression as he waits for everyone to get behind the chalk.

King concentrates on his breathing. The feeling of the wet air on the inhale. King will win. Acknowledge, set aside. The inhale, cold, heavy, the exhale, warm across his teeth. King's life dedicated to snatching this one win from the domination of the knock-off. Computer priest behind the email address rated his chances under 5 percent. Five percent. Acknowledge, set thought aside. King concentrates on the breath, as it comes and leaves. King finds calm. Each drop of rain on shaved head. Tiny, cold. King sees everyone at the line. Irrelevant. This is natural. He is King.

King starts on the flash, flinching at the sound. Sprints out. King in first.

State course three point two miles of rolling park in the rain, grass, hill, picnic areas, trail, woods. Circles the lake. Sky color of wet sidewalks King runs to school on. Course heavy with cut grass, tree, pollen, goose shit. King retains three trophies for state, going back to junior high.

King can't keep the sprint up. Not the plan. Needs to get out in front. Set the tone. Gather intelligence. King knows the kids, sees the concerned look of their parents. Want only the best for their precious. Every opportunity. Every luxury. Tear bread crusts from starving orphans if their baby misses a snack.

King spent a lot of time looking at performance numbers. Watched the knock-offs. Played pickup basketball at Russell Park. Used only left hand. King's a good sport.

King knows they took older, proven knocks, like boosted EPO and testosterone production. Fits data. Knock-offs unstoppable at long-distance running, other shit ruled by that bitch goddess VO2Max. Almost certainly under WADA limits for college purposes. Small blessing. Careful observation shows extreme punk ass laziness, but they are all still beautifully cut. King suspects they also opted for faster muscle growth, slower muscle atrophy.

Onto the trail. Narrow, two-wide, path worn bowl-shaped. Tree-lined, no branches. Evergreens, old. Ferns and shit on the sides. Underbrush cleared.

Mouth already dry. Thirst is familiar, like the soreness in his legs every time he wakes up.

King's pace inflicts pain. No way parents paid for nerve work. Not worth the expense, the risk. King savors the heaviness in the legs, the burning from calves to quads spreading warmly through the back of the royal ass. Because they don't work, pain is foreign, scary. King's training always painful. It is familiar, comfortable territory.

Pace is anaerobic, unsustainable. He slows up, to his normal, punishing race stride. Breath comes in cold gulps.

Chaos behind. Pack of fifty squeezes onto the path. Out of sight of the officials, the first trips and take-downs cascade into pile ups, tangled limbs.

Steps close behind King. King glances. Joel. When King had a job, before King dedicated himself entirely to winning this one race, King bagged groceries. Customers included Joel's parents. No GE produce for them. Can't feed that shit to their growing young boy.

Irony not lost on King.

King runs down the middle. His path, why not? Joel tries to pass on the right, King moves right. They bump. Joel drops back, goes left, King moves left. They collide again, stick. Struggling against each other, pumping arms. King's elbow into Joel's ribs. Joel coughs hard. Doesn't matter. No cost. Blood over 50 percent red cells or some crazy shit. Oxygen-rich molasses. Need to suffocate him to keep his muscles from getting enough air. Does distract, anger. Joel tries to get his arm free for a straight punch. Awkward. Keeping shoulder to shoulder, King pushes hard off his right

foot. Joel stumbles left two steps off the trail. Wide soft whump with crunch of bark as Joel meets pine tree, whole body flat against the trunk. Tree doesn't move.

King runs on. Will not laugh, waste of oxygen. Keep the pace, listen. Bottom of King's lungs burning. Still not recovering from his lead-out. Sweat cut with rain comes freely down the sides of King's face, runs down the back of his neck.

John next. Did not stop for Joel on ground. John stays back not ten feet. King can hear his footfalls, his breath.

One mile check ahead. King slows down to force John up or around. John takes his chance, makes a clumsy trip attempt. King steps high to come down on the errant leg, cleats scraping all down John's calf. John stumbles, recovers, glares. King laughs in John's ear. John elbows King sharp in the ribs. Hurts. King laughs again. Something flips in John's eyes, his jaw clenches, face goes bright red. King widens grin. "That it?" King asks.

They corner. A race official stands off-trail, in front of a pine wider than he is, ready to call out their time. Camera on stand on King's right. King stays fixed on the timer as if intent on hearing his one mile split, not even letting himself flinch. John's fist comes into the royal ear. The pain spikes, King lets reaction show. King cannot be seen to be flopping, but it must be obvious that it was a real punch. John punches King again. Grazes the back of King's head.

Past the camera and the timer, his mouth still open, wordless. King and John run past. King puts his body into a forearm to the jaw. John's face gives. John screams. Comes out half-formed, hands up clutching. King trips him and runs on as John skids on his face through the pine needles, sending them flipping into the air.

That's how you do it.

King pushes back to race pace.

Course turns hard right. King chances a look across his shoulder. Beautiful semi-reflective Kentwood colors, Steve and more.

Course opens up to start mile two. Spaced trees, carpet of cut grass. Bad for King. Can't block the trail. Realizes wet sensation in ear is blood and rain.

One of King's loyal subjects offered alternate plan. Wait for chopped kids to roll by local shitty apartment complexes to buy pot. Beat shit out of them on principle. Cut their tendons.

King feels the footsteps behind him grow closer and reconsiders the wisdom of refusing that generous offer.

Up the hill. Steep, long. Scattered crowd applauds as he approaches. King attacks. Stabbing pain in quads with each lift. Rain and water come with each breath but King's still thirsty, throat scratchy, painful. Keep the legs going. Up and over. Spare a glance back. Field thinning again. Knock-offs come up the hill strong, easily.

King should not have looked. But worth it to see the pain etched on faces.

Steep descent at 2.4. Body straight to the slope, a forty-five to gravity. Keep legs churning, feet touching lightly. Hard to do at speed normally.

Rain slick grass increases degree of difficulty. King gets the full ten points for style. Impeccable form.

King paid for this knowledge. Ran the course all summer. In morning dew. In pouring rain. Dry, scorched. While fresh and tired. First thing in the morning, for afternoon practices, at night. Walked it on his off days. Visualized running over and over. King dreamt about the course, woke up and ran it.

King finishes the hill and starts running again, legs firing pain. His lead is huge. Too large. Spooks the knock-offs. Course falls gently to the shoreline, cattails, algae, lake surface rippling under fat raindrops. Annoyed ducks paddle away from the shore, glaring back. The knock-offs catch King at two five, halfway around the pond.

Steve runs his Kentwood team the smart way. Two pass him at once, one to each side. Get a little ahead of him, keep him from sprinting past. King boxed, both leaning into him, tangling arms. Steve, others run around the outside.

Bullshit. They're in pain, but breathing easier than he is, not as flushed. King aware of his soaked, unbreathable piece of shit cheap uniform.

Bullshit. Bullshit bullshit bullshit.

At least they're in too much pain to talk.

King in sixth place. Rage so hot the heavy wet trees should ignite. Sixth. King thinks of it with every desperate breath. Sixth. The pace punishes him. Sixth. Deep pain in the calves, quads, breathing managing only in exhales, stomach clenched in a tight fist.

Every step a knifing pain up the front of his shins makes King want to scream. Shins never hurt before. King does not yell out, or even slow.

King will not drop. King will not kneel. King will not finish sixth.

King's body adds more lies. Tells King to stop or it will fly apart. King concentrates on his quick breath, pushing the exhale out, out, out, throat raw.

King knows how much air he can push to his muscles, and how fast he can go given that much oxygen. How quickly he can turn his legs over. Skipped school to talk to a university physiology prof. They came up with a theoretical number. If the body didn't lie. Discussed motivation and sports psychology too. Prof kept looking at King like she wanted to say something else. Keeps in touch. They may publish.

How fast he could run, if? Useless. If King wasn't human, he could run faster. If there wasn't gravity, King could jump to the moon. If King had money, he could be knocked too. If he wanted.

The greatest ultramarathoners, the endurance cyclists, go crazy. See things. Hallucinate demons chasing them. Brain forces the body to respond to imaginary threats, stop bitching about lactic acid buildup. Find the if.

King's demons are real, and ahead of him.

If King had suppressed the number. Better off not thinking about it. Went back to his oracle-designed training programs. Still the if nagged. Kept coming around. Like running five minute miles knowing someone, somewhere, ran one in four.

King holds on. Keeps the knock-offs in front of him. Pain follows by a half-step. Something hurts up in the left shoulder now, a pull under his pec every other step, it doesn't make sense at all. King thinks of the five runners in front of him. Their calves, perfectly defined, identical through the group, seem to rise easily, flip forward without effort.

Keep a rhythm. Stay with them. King did ten mile hilly runs around the water reservoir because some program hiding behind an alias told him to. Three miles? Please.

At two seven the turn back into woods, claustrophobic, denser, older growth at the periphery, between the evergreens the tangle of brush edging the path.

Steve cranks his head around.

"You doing all right back there, King?" Steve yells.

King feels the anger across his shoulders, down his arms. Steve has breath enough to taunt. Fists clench.

King reaches out and pulls hard on the jersey of the Kentwood laggard. Almost no give at all. Like grabbing the strap on the shopping carts. Convenient. Kentwoodie comes up flat to the ground, drops feet still churning, eyes wide. King would spit on him if he were less careful about breath management.

The other Woodies hear his cry, turn to look, slowing slightly as they come around. King accelerates, adrenaline flooding his veins, bumps across the left to get in front.

King trained to manage a pursuit pace for the last four hundred yards in emergencies. His supposed trainer threw intervals, brutal sprint-rest-sprint-rest sets, into his weeks at random. King could chase anything down over four hundred yards. The finish line a half-mile away. Four times the distance. King goes. The knock-offs yell things. Sprint ahead, at King's side, finally gasping as they stay with him. Tears stream from their eyes.

The five go with him. King keeps sprinting. The pain builds with each breath, a furnace in his lungs. Confused nerves: soft warmth and light-headedness fuzzy on his skin, while pain roars in his ear, pounds at his temples. Each time his feet touch and he strides, he feels the sharp complaint as his body mounts revolution. Shutdown impulses fight with King, eyelids heavy, fatigue clouding vision.

King in first. As it should be. Righteous. King hopes they will hand him a stack of scholarship offers at the finish line, key to the city, all the trophies he missed out on.

Two drop immediately, their feet falling out of rhythm and then away. Three left, three hundred yards. Another goes, technique and form sacrificed to keep up, tripping on some piece of turf and tumbling.

Two. Steve is with King, the other dropping. King expels breath in roar after roar. Steve's gasps carry a little high-pitched sob. Steve can get enough oxygen but not enough will. The corners of King's mouth turn up.

The last hundred yards complete the circle to the start line, across the wide deep-grassed field, an audience waiting. Steve is weak and underserving. King is right to destroy him. The teams and the parents stare. Steve comes up a fraction short on his next stride, and King knows he has

won. The next stride Steve drops a full inch. The crowds stare. Steve's shoulders slump as he falls out of King's peripheral vision.

You like that? King, unranked, winner. Loser, loser, loser, usurper and state champion. You want to know whassup, Steve? What is up is you lose.

King never allowed himself to doubt. But there is unexpected joy. It washes over the pain he ignores as he approaches the chute, unable to even hear Steve's feet.

Into the chute. King takes the #1 marker from the same guy who fired the starter pistol. Hail to the King, baby. King slows to a jog, heavy legs stomping down. King surveys. Race officials. Girls' varsity, in their shorts and tops, anxious for the next start. Families. Girl from pep holding a plastic gold crown in her hand. King smiles. May deign to wear it. No one makes any noise. They all look at King mute, immobile.

King goes from jog to walk. Doubles over, vomits. Stands. Steve approaches the chute. Ten seconds? Fifteen? Steve's face deeply lined, tears coming down freely. The chute official shakes his head, hands Steve the second marker. Steve staggers, about to drop to his knees but stops, standing, blinking, at the end of chute, staring at the race clock.

King looks at the clock. Impossible time, imfuckingpossible. Imaginary like pi, or e, or the temperature of King's anger. A secret, escaped from the deep of his head and expressed number colon number dot number. King feels laughter bubble up from deep inside his chest for the first time in memory. Start and finish cameras. The race clock is certified. It's real, even though it cannot be real.

No one talks, applauds, coughs, laughs, yells. Even King's laughter is silent. They are all, the officials, King's subjects having long conceded hope, the high-zip, China-traveling opponents, stunned at the scope of King's victory. Only sound the soft fall of rain over everything.

A moment of silence for coronation. ○

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# THE ICE WAR

Stephen Baxter

**"The Ice War" is related to Stephen Baxter's 1993 novel *Anti-Ice*, which was his first major attempt at alternate history. He recently completed his Time's Tapestry alternate history series for Ace, with the fourth book, *Weaver*. He tells us he enjoys AH so much that this year he's serving as a judge on the Sidewise Award. Stephen's next project is a two-book sequence of climate and disaster called *Flood and Ark*; *Flood* has just come out from Gollancz in the United Kingdom.**

## I

**T**he historians have painted March fifth 1720 as a day of infamy, for that was the day the Ice War was declared upon Britain by monsters from the sky. But my own poor life might have ended that ominous morn even before the war's tremendous events began to unfold.

As I lay in my narrow bed in that dawn, Fred Partridge's voice drifted up to me from the chill road outside. "Jack Hobbes! I know you are up there, you blackguard. If you're alone in your pit or if you're not, come down and face your justice like a man!" All this to a counterpoint of a hammering on the tavern door by mighty agricultural fists.

My immediate stratagem was to follow that course that has served me so well throughout my life, that is to hide until the danger had passed. So I burrowed under the coarse sheets, pulling my jerkin tighter around me and my battered old felt hat down upon my ears, for in that spring the cold would freeze the marrow in your bones, and I kept on layers of clothes even during the night. I could guess why Fred was there, but even in that moment of peril I wished I had his daughter in the bed beside me again: full-breasted, empty-headed, sixteen years old, what a bedwarmer Verity had made!

The banging and shouting went on, and for a moment I thought I might get away with it. But then I heard old Mary, wife of the innkeeper, come to the door and demand of Partridge in querulous tones what he was at, frightening her pigs and splintering her woodwork. The crux of it was she opened the door and old Fred got in, and he lumbered up the stairs, sounding like a great horse loose in the house.

Well, I sprang out of bed. As I have said I was already dressed, and had only to pull on my woolen overcoat and my boots and I was ready for the road. I glanced around my room one last time, this mean hovel that had been my home for a year. I snatched up my purse and my pocket knife, and my father-in-law's Perspective, stolen by me as I fled Edinburgh in not dissimilar circumstances to this, all that and a bit of bread from last night's supper, which I crammed into the pockets of my coat. I considered my school books and my heaps of teaching notes, but even if I survived the morn I would not be going back to the Grammar School in Jedburgh. That was that and time to leave, Jack.

I hurried to the window and snatched back the curtain—and just for a heartbeat, despite my own peril, I was taken aback by the spectacle before me. From my elevation on this first storey I saw the town of Jedburgh set out before me in the dawn. Winter ice lay everywhere, months old and cracked and brown with mud. And the Comet sprawled over a grey dawn sky, that astounding tail sparkling as if flecked with gunpowder. And as I watched I thought I saw a bit of that tail, a sparkling fragment, come loose and slide over the sky.

But a fleshier peril than any Comet was closing on me, and I was maundering. I fumbled with the window, but it was frozen in its socket, and my heart pounded.

The door slammed open and Fred Partridge filled the frame, more like one of his bulls than a man. His face was bright with his temper as with the cold, and his grey hair stuck up around his bald pate. "Hobbes, you black-hearted coward!"

In that moment the window flew up, ice cracking around its frame, and my mood switched to reckless cheer. "That's me, Fred!"

He strode toward me. He had the biggest hands I have ever seen, even among farmers, and his fists looked like sides of beef. "Stand and take what's coming to you."

"Not likely," says I. And with a skip I got my legs over the window sill and wriggled around so I was dangling down the wall of the house, and then it was a question of a drop of a few feet to the ground. I finished up in the inn's yard, not a pace from old Mary, who stood glaring in her doorway.

Fred got his head and one huge fist out of the window. "You nimble beggar!"

I laughed. "Yes, Fred, and at the ripe old age of twenty-four years it's ploughing your daughter that has kept me so."

His face turned from red to purple. "I'll wring your neck! My girl's with child, ruined by your stinking seed. Why, to think I paid for you to stand in front of my own son in that school, with your Mathematicks and your Philosophies—"

I stood up straighter, for I do have some professional pride. "You got the

teaching you paid for, Fred, and if it was good enough for a kirk school in Edinburgh, it was more than good enough for your jug-brained offspring. I'm sorry about Verity for she's a good girl and no wanton, but I won't have you pointing fingers at me." And to bring that home I grinned at Mary. "I know how loose your own breeches are, Fred!"

Old Mary gasped at that, and to my shock she went for me. She had muscles herself from hauling kegs of ale all her life, and she gripped my shoulders hard and shook me. Meanwhile Fred roared like a stag and disappeared from the window, on his way down. Trapped, my skull rattling from the shaking, I began to think that last thrust had been a bit too bold.

But I have never been one for hypocrites. I had a breed of Christianity beaten into me as a boy by my high churchman of a father, whose whippings seemed to demonstrate to me the non-existence of God rather than the opposite, for if He lives why would He permit those struggling to believe to suffer so? Catch me if you can, punish me as you will, but spare me your cant and your piety!

Little enough of this flashed through my head as I loosened the grip of the innkeeper's wife on my shoulders and scarpered. And even as I ran I saw that bit of the Comet slide down through the air, sparking and brightening, dropping toward the south-east and so descending ahead of me in my flight, a Star of Bethlehem guiding a man who was anything but wise.

I soon got through the heart of Jedburgh, which is pretty beside its river but has been battered by centuries of war between English and Scots, its poor abbey burned and looted over and over, leaving it a stunted and fearful sort of place, and I wasn't sorry to shake its dust from my boots. From Jedburgh town I meant to head off down Dere Street, the Romans' old track, cutting across the country to join the Great North Road at Newcastle. With any luck I would find a bit of transport before I had worn out my poor feet with too many miles.

I had long mapped out various routes for the day when escape from Jedburgh should become necessary. My final goal was to return to London, full of opportunities for a fellow like me, and I hoped that by now the various misdemeanors that had caused my father to curtail my Philosophical studies at the university there and haul me off to teach in Edinburgh would have been forgotten, if not forgiven—although the likely existence of a few young Hobbeses running around among the Cockneys countered that. My return from Scottish exile so far had got me only to this border town, where, lazy to a fault, I had got stuck for a year. But now at last I would resume my southward route toward the metropolis.

As it happened the road passed Fred Partridge's own farm, and I remembered how I had trod this track many times in search of the delights of young Verity—damnable bad luck she had got with child! But the circumstances were less happy now. Though it was Fred's own fists I mostly feared I was cautious as I walked a field boundary, eyeing the rude farmhouse and the tumbled stables and the big barn that Fred liked to boast he had built himself with his father. The sun was up by now, a pale ghost that shed no heat. I stumbled a bit on soil frozen hard as Roman concrete, and the winter cabbages in the field glistened with frost.

And suddenly my shadow sprawled over the ground afore me, cast not from the sun, which lay ahead of me, but from behind, and it shifted as I watched, quite unnatural. I whirled around, afeared that some lout of Fred's had after all come after me with a torch or a lantern.

But it was nothing human that cast that shadow. It was that bit of the Comet, the fragment of the tail that was falling out of the sky. It had been a mere spark of light, a star, but now I could see it had grown into a lump, irregular, a glowing potato that tumbled as it fell. It sparked and flashed all over. I heard a kind of roaring, too, like a distant storm approaching.

And as I watched those few seconds I heard that roar grow louder, and the potato swelled larger, and I realized that this spitting monster was falling to the ground right on top of me!

I ran, a healthy instinct born of a lifetime of cowardice. I made for the nearest shelter, which was Fred Partridge's barn. Still the light brightened, still that dread roaring pounded my ears, and I felt a breath of hot wind. As I fled into the barn a pair of cows in their byre gazed at me with dull surprise.

There was an enormous bang, a flash like a detonating sun, and a fist mightier than Fred's slammed me in the back. I flew through the air and hit something hard and I knew no more!

## II

It was dawn when I was knocked unconscious, night when I woke. Thus I slept through the whole of a day.

Night it might have been but the light was bright, a silver glow that sent shafts between the slats in the roof of the barn, and made a cow low fretfully. The light was not the moon, of course, but the Comet that still dominated the sky.

All this I saw as I stirred in my impromptu sick bed. It turned out I had been flung across the barn to clatter against a wall; having been lucky to survive the Comet fall, I was lucky again to drop, insensible, into a heap of straw that cushioned me—and then the straw had kept me warm through the long day, for otherwise I might have perished from the cold. Lucky too was I to find, as I shifted my limbs, that I was whole in the skeleton despite my battering, and uninjured save for an aching chest and a pounding in the head. Lucky several times over then, though you might not have thought it from my self-pitying mumbling as I sat in my straw, sore, giddy, hungry, thirsty, and desperately cold, and picking bits of urine-flavored straw from my mouth. I have never been brave in the face of injury.

But I shut up when I heard voices outside, and saw the flicker of lanterns. I was still on old Fred's farm, I reminded myself, and had best be careful who found me there. I crept out of my shadowed corner to see what I could.

I was amazed to find that little had survived of the barn, save the end of it where I had been thrown. Where the barn's big doors had opened, a

great pit had been dug in the earth, shallow like a saucer but as wide as fifteen or twenty paces, and perhaps five deep at its center. Around this the roof was blown away and the doors and walls scorched and fallen. One of those poor cows still stood in her byre, lowing softly as if she needed milking; of the other nothing remained but a splash of blood and some bits of hide. It was evident a great explosion had taken place here.

And at the center of the crater, sitting like a potato on a plate, was a sort of boulder, perhaps six feet high and as broad, its surface scorched and steaming, evidently still hot. Despite my concussion I immediately deduced that this object must be that piece of the Comet tail that I had seen penetrate the air. Under a coating of soot, I thought it glimmered, like ice. Oddly enough I also saw what looked like hen's eggs nestling in the rubble of that crater, and that I could not understand; perhaps they had somehow been thrown here from a shattered hen coop.

But I heard voices again, and ducked back into the shadows. Here came Fred Partridge with a party of his hinds, equipped with rakes and shovels. He set them to clearing away the debris of the shattered barn, and I thought that he might have been waiting out the day until the crater cooled enough for his men to approach, and get it filled in. But the ground in that pit was still too warm and the steaming lump too hot to handle, as one wretched hind learned at the cost of a scalded palm.

Stuck in my shadows, hungry and chilled to the bone, I waited as the lads abandoned their tools and drifted off.

Then I crept forward to spy out the land. The Comet light was bright. I had hoped to find a deserted field, and a way off this wretched farm and back to Dere Street and salvation. But a bonfire had been lit not far from the barn, and two of Fred's hinds sat huddled in blankets beside it. For all his piety old Fred was always a greedy sort as well as a hypocritical lecher, and I thought he must be setting his barn to protection against thieves. Cursing, I retreated into the dark.

Gnawed by hunger and thirst I hunted through the ruin of that barn, but there was nothing to eat but the stale bread I had put in my pockets, and even the cows' water was frozen solid in its trough. I even ventured to explore the crater for those hen's eggs. It was too hot to walk through, but I lay on my belly and reached in to pluck out one of those scattered eggs. But I snatched my hand back, for the egg was hard and heavy and cold and slick—an egg of ice! Whatever these strange formations may have been, none of them had been near a hen—and there was nothing for me.

For a chap who believes he is so clever, it took me a while to recognize there was one tap in that barn that might run for me, and that was the udder of the one surviving cow, who remained ignored by Fred and his boys. I hurried over to the poor animal, found a knocked-over bucket, and rummaged around for her teats. I am no farmer's hind, and my only knowledge of milking was acquired through observing one or two farmers' daughters or maids whose own pretty udders I had my eye on at the time. Still I labored at my task, grateful for a bit of warmth, and the cow mooed her relief, and thus we were united in our physical needs. Mammals, the lot of us! It is only hubris that makes us think we are better than the beasts of the field, so like us in every particular.

After I had drunk of her lactation, warmed and refreshed, I stuffed my coat and hat with straw and huddled in a corner to endure the night. It was as uncomfortable an evening as any I have spent.

I am city bred, having been born in Bristol, and had lived my life mostly in London and Edinburgh, capitals both. I was schooled in London and went up to university there at age fourteen, but was dismayed by the cold modern teachings of the Natural Philosophers with their Systems of the World and their Natural Religion: "Reason, not Revelation, boys!" This may be the new fashion of the day, but I was as repelled by a vision of a God who is absent from the Universe as by one who clouted me daily through my father's fists. I almost missed the old Tyrant!

Well, though my brain is fine enough I became a poor sort of scholar in that place, and at nineteen was forced to flee London through scandals of my own making, which I will not test the reader's patience by listing here. As for Edinburgh, I soon discovered a certain facility for teaching, but I fell into my former sorry habits, and the old Presbyterian whose daughter I tupped there had gone one better than Fred in holding me to account, and after a thrashing I was stood up to marry the girl. We had some months of contentment, I would say, when we could get away from the father, and I think we both felt it in our hearts when she lost the bairn before its birth. After that I went to the bad once more, and was close to gambling away the last of her dowry when the latest Jacobite rebellion erupted and it became prudent to decant Jack Hobbes to somewhere less full of men with steel and muskets, and I fled for the border country.

In short, in all my complicated career I had never been a farmer, and huddled in that barn that night I envied old Fred's hinds not one jot. Those fellows held to their duty, however. All night I heard their conversation continue, ever more drunken.

And during that long night I watched what became of the bit of heaven that had fallen into Fred Partridge's barn.

For a start I saw where those eggs came from.

They were propelled out of the soot-covered kernel itself! One by one the eggs sailed through the air like dried peas spat out by a boy. It took a bit of watching to observe this, for it was not a frequent event. Stranger yet, the eggs underwent their own evolution. They would burst open with a snap like melting ice and scatter fragments onto the earth. And then—so I surmise, for I did not observe this directly—those fragments gathered themselves up again into a sort of dome, perhaps the width of a man's hand, shallow as an upturned saucer. You could see that the dome incorporated bits of the earth, from the way the ice was streaked and dirty.

A curiosity it was, but I am no nature-watcher; my intelligence is earthier than that. I fancy I slept a little.

I was disturbed by a tickle, an awareness of something moving before my face, small and furtive. A rat, perhaps. Without opening my eyes I swept my arm around, fancying I might make a snack of him in the hinds' bonfire. But my reward was not the squeaking I had expected but a kind of tinkle, like a falling icicle. Startled by that, I sat up. I found a little heap of icy fragments before me: a thing like a lens, perhaps six inch-

es across, and fine rods no wider than straws, broken, splintered and piled up on the ground. It had not been there when I fell asleep.

I looked about. Outside the ruined barn the sky was brightening, the sun's light seeping behind the Comet tail. The bonfire had burned down, and Fred's two hinds lay sleeping, one snoring loudly. At last, I saw, I had a chance to make a run for it. But I was distracted by motion in the pit before me.

There was a stirring in the broken earth around one of those domed forms. Then, to my surprise, thin pipes scraped up out of the ground like fast-growing flowers, standing quite vertically, making a sort of crown all around the lip of the dome. These icicles were perhaps a foot long; I had never seen the like before. Then, stranger yet, the dome itself quivered and shook, and with an icy grind it rose up from the ground, rising through its cage of icicles to the top. Now I saw that the "dome" was as convex beneath as above, and that this ice artifact was in effect a lens, opaque and streaked with the dirt of old Fred's floor.

The lens settled for a moment, and then the icicles themselves began to move. They slid under the carapace of the lens, remaining dead straight, clustered, moved again. And as they did so the lens itself began to shift to and fro, the whole assemblage migrating across the pit, inch by inch. The thing was something like a toy of a Greek temple on the move, those upright pillars sliding around beneath the lenticular roof. It was a strange manner of movement quite unlike anything I had ever heard of, though I have read plenty of travelers' tales. And yet it had the semblance of life, like an ungainly crab made of ice. I realized that such a beast had disturbed me as I slept, and I had thoughtlessly smashed it up.

And now that I knew how to see them, I realized that more of the creatures were shifting about their pit, those odd lenticular bodies sliding up and down the ice pipes, and shimmying to and fro with that odd, disturbing movement that would become so familiar across all of England in the days to come. Some of them, indeed, seemed to me to be venturing away from the pit, and even out of the barn. I could not count them; there might have been hundreds.

And I heard voices coming from outside the barn, old Fred's gravelly tones as he rebuked his drunken hinds, and the shouting of men and the barking of dogs. Distracted by the ice novelties I had let slip my only chance of a fast escape from that wretched place. Trapped, still! Steadily cursing my own foolish curiosity, I slithered through the shadows to see what was what.

This time Fred had gathered a veritable army, armed with staves and half-pikes and even a few fusees, fowling pieces, and the like. I observed this with a sinking heart, imagining Fred was setting off a hunt after me, his fox. But the men were heading not for the barn but in the direction of Fred's farmhouse, and I shook off my funk, for now I observed that the farmhouse too was damaged.

The house was always a rude affair, built largely of stone robbed from the abbey in Jedburgh. Now one end of it, where the kitchen was built, was crumpled up and disheveled, the brick wall cracked, the chimney

stack askew. I wondered if some fresh piece of Comet had come tumbling to earth, but I had heard nothing in the night. But I saw that what had damaged the house had come from not from above the earth but from beneath it. The kitchen had been nudged up by a great dome of dirty ice that had pushed its way rudely out of the ground, quite regular, the cousin of one of the tiny domes I had observed in my pit—but huge, as I could tell from the perspective of the men who walked around it and even over it. All this had erupted from the earth overnight.

And as I framed that thought I felt the ground shudder like the slope of Etna, rattling the barn and alarming the cow. I thought I knew what was to come next, and that if I were one of those hinds around the big dome I would run fast.

I did not have long to wait. Needles of ice shot out of the ground all around the hillock of ice, no splinters this time but pillars each a yard wide. Earth was scattered, the ground shook, and those hinds ran like mice. The pillars grew like weeds until they were perhaps a hundred feet tall.

And then came the second act as that mountain of ice shuddered and clean ripped itself out of the frozen turf, and rose to the top of its circle of pillars with a deafening scrape. It was astounding; save perhaps for waterfalls and floods, I had never seen such a mass in motion. And if I was startled by all this, imagine how it was for the hinds, men whose minds were a void of ignorance broken only by the pious babblings of their ministers. Fred Partridge, meanwhile, was hopping about furiously, because the rise of the ice lens had toppled over his farmhouse as easily as a man kicks over an ant hill.

Already those great limbs broke from their circular stations and slid back and forth beneath the belly of the lens, and gradually began to carry that ice carcass across the countryside, like legs bearing an animated tabletop. Fred and his men fled without looking back, and I was free at last.

But the spectacle wasn't done yet. I saw another beast, even bigger, erupt from Fred's turnip field beyond. And then came another up from beneath the riverbed that shattered a water-mill into flying splinters, and another beyond that, so far off it was misted by distance, huger even than its Titanic brothers. As soon as they emerged all these beasts began the purposeful movement of the first, those limbs moving back and forth like sunbeams cast through a cloud. It did not take me long to deduce that the beasts were converging on Jedburgh.

In the turmoil of the 'Nineteen, as the Stuart-led mob of hairy-arsed highlanders had come down from the hills, Jack Hobbes had scarpered quick. Likewise now as those ice monsters bore down on the unfortunate town I ran the other way, heading south-east down the rutted old Roman road, ran until my lungs were fit to burst!

### III

**W**hen I was sure there was no chance of pursuit from Fred Partridge and his men, I slowed my pace to a walk, and began at last the purposeful

part of my journey, heading down the rutted old Roman road toward Otterburn. The day was just as cold as those before, the ice holding fast to the land. But I was young enough and fit, and soon walked off the effects of my narrow squeak with the ice meteor and my night in the barn. I had my purse and had every intention of making a comfortable journey of it, lodging in inns and farmhouses with perhaps the bonus of a plump innkeeper's wife or two to keep me interested, and if I was lucky I might catch a coach service.

But these plans came to naught.

It was soon apparent that the icefall on Jedburgh had not been an isolated event. The country hereabouts, and even as I walked over Carter Bar into England, was pocked with craters, many of them tremendous pits that dwarfed the one that had almost killed me in Jedburgh. Too, I observed a multiplicity of the little ice crabs scuttling about the countryside, which would get under your feet when you were walking, particularly when the evening came on. I took no particular care about crushing the little pests. But I saw their greater brethren loom on the horizon, those lenticular bodies horizontal and their legs always dead straight and shuffling back and forth, and gleaming a cold blue when the rare sunlight caught their carcasses. And though I could not see them at it, I suspected they too moved about more at night, from the icy grinding that echoed across the dark country as I huddled for shelter in ditches or in woods.

In response to this invasion the villages on my route, Campdown and Byrness and Rochester, were abandoned like plague towns. It seemed the people had fled in panic, though where they had imagined to go I could not fathom, for the whole country was assailed by the beasts. It seemed to me that the monsters might not be interested in humanity at all, and that the damage they did to our communities might be as incidental to their purpose as the flattening of a molehill under the boot of a marching soldier. Still, there was often an empty cottage or two that offered me a bed, and a bit of bread or hanging meat or moldy cheese, and I got myself warmed up regularly.

When I came on Otterburn I had a choice to make. I could continue on Dere Street to the south and east making across the fell for Newcastle, or I could cut east and follow the valley of the Coquet toward Alnwick. Though I would come on the Great North Road further north than Newcastle, this latter course I decided on. I was not the only footsore traveler, and the villages were becoming increasingly emptied out, and I fancied I might provision myself with the fishing on the Coquet. And I fretted how things might be in the south if the vast population of England was taking flight from its cities. It might be better to make for the north and Edinburgh, where I would have to deal with an irate Presbyterian father-in-law, but better that than a mob of starving Londoners.

So I followed the Coquet as far as Rothbury, provisioning myself with fish from the frozen river, and then cut across the moor toward Alnwick. I repeatedly saw the ice monsters march in the distance, and saw more ice meteors crash to the earth.

Before I reached the town itself I came at last upon the Great North

Road, that great old rutted artery of ours. I had traveled this way with my father from London to Edinburgh some years before; it and the rest of the Romans' old routes are still the best roads in the country. We live in the shadow of a better past, and I have often believed myself born into a wrong age! The North Road, in fact, was at the time of the Ice War being improved for the first time since a legionary last wiped his backside on this island thirteen centuries ago, these enhancements being paid for by a system of tolls and turnpikes as legislated by Parliament. This system of maintenance I thoroughly approved, and I intended to tip my cap at each of the turnpike gates that I jumped over with my purse unopened.

But that day I did not have the road to myself. I was dismayed, if not surprised, by the volume of traffic thereupon.

I stood on a slight rise by the side of the road and considered it. There were stagecoaches and broughams and farmers' carts, and people on foot and dragging barrows and the like that bore bundles of victuals, clothing, barrels of water, even furniture, tables and chairs and carpets. Some of these walkers looked as if they had never set foot upon a road in their lives, and yet were now as cold and mud-spattered as the rest. The odd thing was that while the bulk of this stream of people and horses and vehicles came from the south, perhaps originating in Newcastle and the southern cities, there was a counter-stream of it coming from the north. Standing there watching this great purposeless to-and-froing, I had to laugh.

"Sir, I'm glad in all this distress somebody manages to find something funny."

I turned. A fellow had come to stand beside me. He was perhaps sixty and well enough dressed, though his coat was torn open at the back, his gaiters mud-splashed and his wig askew. He had a long nose and heavy eyebrows, and eyes that could pierce, but which rarely met your gaze. Behind him, as I noticed now, was a coach toppled over in the ditch, and boxes and cases tumbled in the road. By the side of the coach another man was crouching, and talking softly to somebody within.

I said, "By the look of you, you've come out of that spill."

He brushed at his grimy coat. "So I have and I'm grateful for no more than a knock or two." He had the thin tones of the Londoner. "And you, sir, laughing your head off?"

"Oh, not at your upturning—I did not witness it, I assure you."

"Then what?"

"At all this." I indicated the crowd. "People fleeing this way and that like ants from a broken-open nest."

"Ants, eh? You have a lofty view of humanity, sir. It's worse in the south, I can tell you—we've come from London, and even the capital is in a ferment as the Phoebeans burst from the Thames clay. The road is a river of suffering! Can you not see that?"

"Ants," I repeated. "If the ice monsters are everywhere, what earthly use is fleeing?"

His eyes narrowed as he studied me. "That's just as Swift says."

"Swift?"

"The Dean, my companion." He indicated the man by the coach. "You must have a heart as cold as his. Your name, sir?"

I bridled a bit at his peremptory tone, but I gave him my "Jack Hobbes" readily enough. "And you?"

He extended a hand. "Defoe. Daniel Defoe."

I shook his hand in something of a daze. "Really? Then that's a remarkable coincidence, for I read a book by a namesake of yours not six months back: 'The Life and Strange Surprising Adventures of—'"

"That was one of mine," he said, and he nodded, adopting a rather superior expression.

I was quite enthused, for I had enjoyed the book. "A rattling tale, sir. Although I never quite believed that a man as self-reliant as your Crusoe would start bleating about Providence. What Providence need he but his own hands?"

"Ah, but my purpose in writing the yarn was wider than moral fabulating. I am greatly taken by the tales the travelers bring back from the unexplored corners of our world. It seemed to me that such an adventure as Crusoe's might never have happened to any man before in the whole history of the world, for never have explorers sailed so far and into such unknown domains, not even the Phoenicians. My story is a new genre that explores novel possibilities: *what if this were so?*"

I nodded. "I enjoyed the passages of his endurance. He changed his island forever, as the Romans made Britain."

Defoe gestured at the road. "And we live in their shadow yet. But no Roman ever saw the Americas, man! We live in an age of a great unfreezing of the mind, of the transforming of the fortunes of man—"

"Oh, for God's sake don't let him debate his vulgar scribblings." This was the fellow Swift, who came clambering up to join us. He was a bulkier man with a rather clipped accent, perhaps a few years younger than Defoe.

Defoe sneered. "Going to press your old Tory pamphlets on him, are you, Swift?"

"For something to read when he's finished wiping his arse on your Crusoe, perhaps, *Foe*—for that is his name, you know, sir, the 'De' being the affectation of a man born in Cripplegate. . . ."

And so they bickered, two gentlemen of letters preening at the side of a road full of the destitute, while their coach lay in the dirt. I could not help but laugh again.

"Look here," Defoe said to me. "You look strong enough, and you are evidently no fool if your reading tastes are anything to go by. You must help us."

Swift seized on that. "Yes! You can see how we're fixed; our wretched coachmen took off on our horses and left us helpless. We're neither of us men of vigor, and we must get to Edinburgh, for the sake of the King, the country—for all mankind, I wouldn't wonder! Now the first task is to get poor Isaac out of the coach. When that is done you can find us some alternative transport. And then—"

"And then," I said, tipping my hat, "I will flap my wings and fly up to yon Comet, for there's as much chance of my doing that as butting for you. Good day to you, gentlemen."

Swift was outraged. "We three and others were convened at the orders of King George himself—the King! We are a Grand Council of Mathematicians, Alchemists, Astronomers, and other Philosophers—the Great Minds of the age, salted by a few traveler types like this fraud Foe here. Our commission is to find a solution to the blight of the Phoebeans. Having been forced to flee London our destination is Edinburgh, a city with a great concatenation of scholars and yet, according to accounts, less afflicted by Phoebean assaults. Now our coach is overturned, we are abandoned by our men—it is your duty to help us, sir, duty as commanded by the King!"

"A fat lot of good the King has ever done me. And as for duty, mine is to preserve my own life, not to jump to the tune of codheads however high-born."

Defoe grinned. "Ah, a cynic! A man after your own heart, Swift. Well, then, sir, what will induce you to help us? The Crown is not without means."

"What use is money? Those—what did you call them?"

"Phoebeans. For some had thought they came from the moon."

"Ask them their price to forsake the earth for the sky from whence they came."

Defoe laughed. "A cynic indeed, but a man who's honest even to himself. You should read Swift's 'Tale of a Tub,' sir, though it pains me to recommend it. Then if not for duty or money, what would motivate you to look in our carriage? How about curiosity? No man as intelligent as you can be without a smidgen of that. Could you walk away without ever knowing who's in there—eh?"

I eyed him. "You have me there, Mister Defoe. Very well."

And so, escorted by the two eminent gentlemen, I walked toward the overturned carriage.

Inside, on his back where he had been thrown by the crash, lay a portly man of great years—he might have been eighty. His hair was long and flowing, and truth be told if it was a wig it was as great an artifice as I have seen. His nose was fleshy, his mouth small, and he had an odd, wary look about the eyes. He peered up dimly; I must have been silhouetted against the sky. "Who's there? Is that you, Maclaurin?"

"No, Isaac," Defoe called, not unkindly. "We've had something of a tumble, and it's rather a long haul to Edinburgh yet."

"Then who is this young man?"

Rather rudely I snapped back, "My name is Jack Hobbes, if it's your business. More to the point—who, pray, are thee?"

Defoe dug me in the ribs. "Good God, man, this is Isaac Newton! Have you not read the 'Principia'? Thou art in the presence of greatness!"

I had taught at some good schools and studied at better, and was not ignorant of modern Philosophy. "Of course! You are the vortex fellow, are you not?"

"No," Newton said icily. "That was Descartes." As of course I knew, but I could not resist tweaking his tail. "Will you help me out of this damn box, or not?"

Grinning, I could hardly refuse.

It took the three of us, the others pulling, me down in the coach pushing, to haul poor Isaac's bulk out of that tipped-over coach; fleet his mind may have been, nimble his great body certainly wasn't. And as we worked, I was aware of a certain shiftiness in the light, of pivoting shadows that brought unpleasant associations to my mind.

At last we had him out by the side of the road. Newton looked about at the ragged, fleeing people and the icebound landscape with his eyebrows raised; he habitually had a rather supercilious expression. "It seems to me self-evident that we must hail one of these carriages, or a cart would do, and continue our journey post-haste."

Defoe and Swift immediately started arguing about what category of vehicle would suffice, and how much of their luggage they, or rather I, should try to salvage. And all the while, entirely unnoticed by them, our shadows shifted below our feet.

I cut through the chatter. "I humbly submit that we adjourn this meeting to the ditch yonder. Or else your three eminent heads are likely to be stove in by *that*." And I pointed to the sky, from whence fell another Cometary fragment, this one a blazing ball that looked to dwarf the piece I had seen fall in Jedburgh.

People started screaming and scattering, picking up their children and running off the road, while helpless elderly folk stumbled as they could. As for the scholars, I never saw before or since three men with a combined age of one hundred and ninety-two years hop in a ditch with such alacrity.

And the fragment struck.

As the ground shook, Swift and Defoe to their credit took care to cushion Newton in the ditch, elderly fellows both but putting aside their own discomfort, Defoe lending an arm as a pillow, Swift offering his cloak as a blanket. Newton, though, seemed oblivious; he had a battered leather-covered Bible that he produced from a coat pocket, and he began to thumb through this, muttering verses from the Book of Daniel.

When all seemed calm, I crept up out of the ditch.

The latest icefall had dug a new hole in the earth, bigger than any I had seen before, that pretty neatly cut the Great North Road in two. I learned later that this was near the village of Shilbottle, if you know it. I could see nobody living; everybody who was able seemed to have fled north or south, depending on which side of the hole they happened to be on.

And others, caught up in the tremendous impact, had been scorched, crushed and, worst of all, *dismembered*. I do not pretend to be a strong man, and the sight of scattered limbs and burst-open guts on the road reminded me of what a fragile bit of clockwork housed my own soul. Aside from that, there were overturned carts and scattered bundles of possessions littering the road—an unrolling carpet of quite good quality, a poor horse with a broken back that neighed pitifully as it tried to raise itself.

In the crater, eggs were already spitting out of the carcass of the fallen

bolus, a new generation of chilly colonists come to our frozen world. Not only that, I saw, looking wider, more of the great ice beasts, which Defoe had called "Phoebeans," were sliding across the landscape, mighty structures like cathedrals on the move—toward us.

I scuttled back into the ditch and reported my findings. "We're the last breathing humans within half a mile, I should judge," I said. "And the Phoebeans are on the way here, I know not why."

Defoe said, "We should scarper like the rest. Perhaps we can fix an abandoned cart to give Sir Isaac a ride."

Without looking up from his Bible Newton pronounced: "No."

I near exploded. "What means 'no'?"

But Swift counseled patience. "A moment, Hobbes. What is your thinking, sir?"

"The Phoebeans, whether sentient or no, are a presence in our world now—that seems clear enough. They are a force like the weather, and if we run from them we will be as animals in the field, or as savages in the Indies who flee the storm. We will deal with the Phoebeans as we deal with nature's other challenges, by the power of reason."

Swift, to my dismay, was nodding enthusiastically. "Yes—yes, reason, that's the key."

"But reason relies on observation," Newton declared from the ditch. "I was able to deduce the law of universal gravitation from Tycho's masses of astronomical sightings, rendered by Kepler into his rules of planetary motion. Now we must similarly observe these Phoebeans."

"Us?" moaned Defoe. "Why us?"

"Is that not the King's commission?" Swift thundered. "Did we agree to serve on his Council, did we take his shilling, on condition there would be no risk to our persons?" Shuffling in the mud, he bowed from the waist to Newton. "You know I have issues with your over-reliance on Mathematics, sir, and the reduction of the world to a few computations." He raised his muddy arms. "We degenerate creatures pronounce one System of the World after another, all based on whimsy and fumes, and each contradicting all the others! What hubris. But I side with thee in your championing of reason. I will be honored to be your Tycho."

Defoe sneered. "You pompous popinjay. Why, you wouldn't even be on the Council if I had not persuaded Walpole of it, after the way you pamphleted agin him—"

I got to my haunches. "I'll leave the debate to you, gentlemen. I'm off."

Defoe grabbed my arm. "Wait, Jack. For all our bluster—if you go we three will surely die here."

"That's of no concern to me, for many men will die before this episode is done. Can I save them all?"

Swift gestured at Newton. "But you could save *this* man. If he were to die here in this ditch could you live with your conscience?"

"Blame the Phoebeans, not me!"

I spoke defiantly—yet I was not being honest. The truth was that his pomp and piety penetrated my defenses; Swift, a churchman, reminded me too much of my father, damn his eyes.

Defoe, wiser than the others and a wheedler, was still hanging on to my

arm. "Just stay a while, Jack. Help us get sorted out before you go." He glanced at the sky. "It will be dark soon enough. Let's go and have a rummage in the spill on the road, man, you and I. Do you remember how my Crusoe plundered his wrecked ship for provisions? Let's you and I do the same—eh? It will be an adventure."

I gave in. "For you and your book, then," I said to Defoe. "For I do believe all the rest is nonsense."

"Good man," Defoe said, and he started to move. "Come on. Help me out of this damn ditch before I freeze in place."

So Defoe and I crept out of the ditch.

In the abandoned luggage that littered the road we found much that was useful—clothing, blankets, flagons of beer, victuals like cheeses and salted meats—and much that was not. I was startled to discover what people will carry with them when they flee for their lives: we found a trunk entirely full of hat boxes; and we found a spinet, carefully wrapped up in a blanket. Well, the fond owners of these pieces were learning to get by without them now.

Defoe watched me working through this stuff. "You have a ruthless way about you with other people's possessions, Jack."

Having had my conscience poked by Swift, I wasn't in the mood for any more. "I have never been a thief to any great degree. A wastrel, a faithless lover, and a coward, yes. But I cannot believe that the owners of these items will ever return to collect them."

"Quite right. So we have a moral right to make use of them, do we not?" That sounded like sophistry to me, but I did not remark on it. "Come. Let's lug our haul back to the scholars."

For all their elevated intellects, both Newton and Swift fell on the meat and cheese readily enough, and spread blankets over their legs. Swift in fact had used a pocket flint to start a fire, of timber from a smashed-up trunk. I fretted over this, worrying that the smoke might give away our location, but Swift sneered at me. "You aren't dealing with highwaymen, boy; you must set your instincts aside. The Phoebeans are another order of creature entirely. You might as well try to hide from the Eye of God." I had no convincing counter-argument.

And Newton sat upright like an elderly bear waking from hibernation, and he pointed. "In this changed world, even a scrambled-together bonfire has lessons for those with eyes to see."

I looked where he was pointing, and saw there was an ice crab in the ditch with us, only a few inches high, like a milking-stool built for a doll. It was stuck in a kind of gully in the frozen mud, and to emerge it would have had to pass by the fire, and this it was remarkably reluctant to do. When at last it inched toward the flame it grew sluggish and then immobile. But when, at a gesture from Newton, Swift shielded the beast from the heat with his hat, it quickly revived and scuttled away.

"It doesn't like fire," I breathed.

Swift snorted. "Nor would you if you were made of ice."

Newton said, "Indeed it seems to suffer a kind of heat paralysis—a calenture, if you like."

Defoe mused, "Yet they arrive in heat, in those steaming projectiles that fall from the sky."

Newton said, "You, sir, entered this world through a birth-passage of flesh and bone; if I were to stuff you back there now it would surely kill you."

"And my mother," Defoe murmured, but the point was made.

Swift declared, "Sir Isaac has shown us the way by example. We must observe, observe! That is our task." He glanced at the sky. "There is light yet for the two of you to return to the road and study our visitors—whatever they are up to in their pit."

Defoe and I glanced at each other. Defoe asked, "And why not you, Jonathan?"

"I have the fire to attend to. Besides, Defoe, spying comes naturally to you, does it not?"

Defoe glared at him. But he turned to me. "Are you game for a bit more adventure, lad?"

I was reluctant to leave the warmth of the fire, but I grabbed a handful of cheese and a small keg of beer, and led the way out of the ditch.

## V

**D**espite Swift's theorizing, we followed our instincts and crept out of sight along the road until we came to a tipped-over coach. We hid inside its carcass, thus sheltering from the raw wind, and feasted on cheese and beer while we peeked out through broken slats at the Phoebeans. To inspect them we used my father-in-law's Pocket Perspective, which we passed from one to the other.

The pit their latest bolus had dug out was a nest of industry. Phoebeans from miles hence were sliding across the country to converge on this place, which appeared to be of importance to them, and many of them already stood over the crater. Some were wider than they were tall, if you can picture it, like immense tables with that characteristic lenticular shape to their tops, but a few towered over the others. When they were at rest they were entirely still, with no signs of life, and the gang of them together gave you the impression of some fantastic city, with those tall fellows like the water-towers you see in some dry countries. But others moved, even clambering in and out of the pit, as if engaged on some vast construction work.

"When they move," Defoe said, "that sound—I have met travelers who have visited the Frozen Sea, and chill Tartary. They describe the groan of the ice that plates the sea, and of the ice rivers that pour down from the mountains. Swift mocks my interest in such fellows and their tales—he says he is planning a travel book of his own, entirely mendacious, that will spite my Crusoe and the whole genre—let him! If not for such interviews I would not know of the sound of ice en masse, which is just that noise the Phoebeans make."

"But nothing more purposeful," I said.

He glanced at me. "What do you mean?"

"They have no voice I can hear. They do not even bellow like oxen, the calls of the dumb animals. They are silent save for the grind of their icy limbs."

"That's a good observation," Defoe said. He fumbled for a battered journal and, with a bit of charcoal, made a note. "No apparent communication. Look, though." He passed me the Perspective. "Can you see a sort of light playing about their limbs when they move?"

In the darkling light, I discerned a sort of sparking about their tall legs when the creatures were in motion, and especially the seamless joints where the limbs slid under the icy carapaces. "I have seen such sparks before," I murmured.

"You have?"

"It is a kind of Electrick. If you rub a bit of amber with a cloth, it might spark, and will pick up scraps of paper." I used to perform such tricks in my classes, trying to induce an interest in the world's phenomena in the generally cloddish minds of my students. I felt an odd pang, then, for those rows of innocent faces in Edinburgh and Jedburgh—more dependents you have abandoned, Jack, in a lifetime of selfish flight, and think too of Verity in Jedburgh with her unborn child, and poor Millie in Edinburgh with hers born dead—think on and have done with it!

Defoe made more notes. "Old Newton will pat our heads for this."

I ventured, "The Dean said you were suited to life as a spy."

Defoe snorted. "Spiteful old fool. It's true it's an adventurous life I've had, lad—perhaps you know something of my biography?"

"Not a thing."

He looked offended, and while we were stuck in that broken box he whispered to me more than I wanted to know about his life: his birth to dissident Presbyterians, the dowry he gambled away, his career as a merchant that ended up with him arrested for debt, and then his pamphleteering that got him pilloried and put in prison, from whence he was hoiked out by a Tory minister on condition he spy for the English government. His greatest triumph had been in Scotland, where he had spread doubt and division in the Scottish parliament during the negotiations that led up to the Act of Union with England.

"If I'd been exposed the Edinburgh mob would have torn me apart! I'm nervous enough in going back there now. So you see, Jack, yes, I have spied, Swift is right about that. But life has a way of compromising one. Few of us have the luxury *he* does of indulging his damnable Augustan superiority from his seat in Saint Pat's in Dublin. . . ."

On he went, dissecting the flaws in the Dean's complicated character, while the Phoebeans built their city in the dirt, and I wondered whether such rivalries ever raged in a termite hill before a human boot came along to crush it.

We returned to the ditch, where Newton and Swift had made a merry nest before the fire with blankets and coats spread over them, while Defoe and I had been shivering on the road.

Defoe eagerly reported our observations, stressing the evidence of Electrick, but Newton seemed unimpressed. "It might be so. Electrick is related

to an effluvium in the body, which may be removed by friction. If there is an opportunity to dissect one of these Phoebeans, small or large, we may detect the flow of that effluvium in its veins. Perhaps there is some analogy of the circulation of the blood in a man, which Harvey mapped. And indeed perhaps heat induces some calenture in them that impedes that flow."

I said, "Sir, I do not understand why you refer to the beasts as 'Phoebeans.' What have they to do with the moon?"

"Nothing!" Swift declared for him. "But the head of the Comet that brought the Phoebeans to the earth sailed *past* the moon. Some ignorant astronomers believed it originated there and labeled it accordingly, and that is the name that reached the court of King George—and stuck."

Defoe shook his head. "If only its course had differed by a few degrees, and it had struck the moon and not come to the earth!"

I said, "But if the Comet did not come from the moon, then where did it arise?"

"That we do not know," Newton said. "But the Astronomer Royal sent me observations which, before I was rudely turfed out of London, enabled me to use Halley's methods to figure the Comet's path as a hyperbola; it has come in from the trans-Saturnian dark, and will sail around the sun and return there. I determined that it passed close to the planet Mars; and I consulted recent observations of that planet. You may know that in the Plague Year the Italian Cassini observed caps of white close to the dynamical poles on that world. . . ."

"Really?" I was intrigued; I had not known that the surface of any other world had been mapped.

"In the years since, his nephew Maraldi has seen how these caps wax and wane with the seasons. Maraldi speculates that the caps are made of ice or frost, which congeals in the winter of Mars and melts in the summer. And last year, when Maraldi watched yon Comet sail by Mars, he saw a prickling of light over the north polar cap of that world."

I was stunned by this. "So perhaps this Italian saw icefalls on Mars, just as here!"

"It is clear that the Phoebeans are creatures of the cold realm beyond the sun, who have come sailing on their Comet to plant their crab-like seeds on the inner worlds."

Swift was agitated by this talk of the Phoebeans coming from the heights of heaven. "But surely the Phoebeans could be some atmospheric phenomenon—spawned in high clouds of ice, could they not? Surely they cannot have a heavenly origin. For as Aristotle himself observed, 'Order and definiteness are much more plainly manifest in the celestial bodies than in our own frame; while change and chance are characteristic of the perishable things of earth.'"

Defoe snorted.

But Newton regarded Swift gravely. "It is disturbing indeed to imagine that such disorder as this can rain down on our poor Earth from that celestial realm, the seat of order I myself have figured in my work. And yet it seems to be so; Maraldi's observations prove it."

"No, no." Swift stood up in the ditch, trying to glimpse the Phoebeans and their works through the debris on the road. "No, I won't have it. Such

giant, beautiful creatures as agents of chaos? A heavenly origin for demons of destruction? Rather they may be an example of the truly rational being, Sir Isaac, that which we degraded creatures only imagine ourselves to be."

Defoe said, "And what 'truly rational beings' go around digging holes in the earth and blowing up carthorses?"

Swift waved an arm. "This may all be a part of a grand design that we cannot discern, any more than a worm comprehends meaning in a man's footfall."

Defoe laughed at him. "So you dance in your thinking like a maiden at a gavotte, Swift. If they are chaotic they cannot be from heaven; if Newton proves they are from heaven, they cannot be chaotic—despite the evidence of your eyes. Well, if they are so superior as all that, you had better hope that they treat us better than you English in Ireland treat the natives there."

Swift, growing enraged, would have responded again, but I held up a hand. "It is growing dark. The Phoebeans are more active at night, have we not observed? *Listen.*"

The scholars fell silent and duly listened. And after a moment they all heard, as I had, a groaning of ice, a crackle like the crushing of an autumn leaf. I risked a slither out of the ditch to see.

That groan was the sound of stressed ice, the crackle the sparking of the Electrick effluvium that might be Phoebean blood. The Phoebeans were on the march.

## VI

A great convoy of them, pale in the fading light, slid down the Great North Road and the ground around it, heading south toward us.

And behind this marching city, I saw a still more tremendous sight. From the latest crater gigantic pillars shot into the air, mountainous; I had not seen the like before; they might have been a thousand feet high. And a tremendous ice lens of similar dimensions soared up the column of pillars to tower over even the marchers before it; indeed on the back of this new ice behemoth rode more Phoebeans, structures the size of cathedrals like fleas on a dog's back.

As the twilight gathered and the Comet unfurled its spectral sail across the sky, this behemoth ground into motion. It was like a mountain on the move. Where its mighty limbs scraped the ground, ramparts of turf and soil the height of a man were casually thrown up. And from its sharp circular rim ice eggs flew out to arc to the ground, each the birth of yet another Phoebean.

I scurried back into the ditch and described what I saw. "It is like a tremendous mother. The Queen of the Phoebean hive, come to lay her eggs."

Newton nodded his great head. "I fear you have it. The Phoebeans want the rocks of England for their cold nests, not her people. And we have happened on the heart of the invasion—the Queen herself, as you say, Hobbes."

But Swift was growing agitated again. "I won't believe it! If the Phoebeans are here to smash up the old human order of corruption, greed, and stupidity, then good! But they will replace it, not with chaos, but a new world order of reason. They need only be convinced that we lowly beasts are capable of reason too, and we will be spared." And with that he jumped to his feet. He staggered; later I learned that the man was an habitual sufferer of vertigo and hearing loss. But he jumped out of the ditch, and he strode toward the Phoebean procession, arms uplifted. "Master Phoebean! Hear me!"

Defoe called after him, "Don't be a fool, man! Jack—we must bring him back."

"Not I. If you want to emulate Swift in being squashed like a bug, please do so."

He glared at me. "Showing your true colors at last, Jack? Despite all you said I thought better of you."

"Then you're to be disappointed, aren't you? And nor do I believe you will get yourself killed trying to save a clear enemy."

"Then you don't know me," Defoe said. And to my great surprise he hopped up and out of the ditch, and was gone after Swift.

Newton eyed me, but did not speak. As we waited in silence, I was brutally glad I had not gone with the others, and stretched out my miserable life a few more minutes.

Defoe returned, alone. He would not meet my eye.

He told us how Swift had approached the Phoebean caravan, arms aloft like a preacher, calling out in English, French, and High and Low Dutch. Defoe tried to pull him away, but Swift would not respond. Finally he settled on Latin, the tongue of better men than us, and stuck to it—stuck to it, Defoe said, as the lead monster in that walking city loomed over him, and its sliding limb erased him in an instant.

That was that for Jonathan Swift. I have never known a man so disappointed in the world he found himself in, and we low humans with whom he had to share it, and it was that disappointment that killed him in the end, for it blinded him to the realities.

We three sat stunned by this turn. I offered Defoe some of the beer; he did not respond. The rumble of the Phoebean caravan was loud, a grinding of ice that made your teeth ache, and it went on and on.

It was Newton who stirred first, a grave figure, huge in his mound of coats and blankets. "We must fight back," he said. "If not, and if they continue on their course and that behemoth Queen reaches London, the whole country will be seeded with their eggs."

Defoe nodded. "And when England is all churned up into crawling ice bodies, where will *we* be?"

"France!" said I.

Defoe looked at me blackly. Then he asked Newton, "How, sir? How shall we fight back?"

"We must make for Newcastle. If we find a trap and horses, we might yet outrace the Queen's caravan, which is tremendous but slow."

Defoe said, "We might find a horse or two in Shilbottle. And in Newcastle?"

Newton said, "The city is walled, is it not? And it stands over the Great North Road. We will make our stand. If we can stop the Phoebeans there we may save England. But if we fall then all falls with us, and eternal night for mankind will follow."

"Then we must not fall."

"In the morning," Newton said. "The Phoebeans are relatively quiescent by day. In the morning we will outrace them." He closed his eyes, and fell into a kind of slumber. He was a very old man, I remembered, and must be exhausted.

Defoe looked me square in the face. "So, Jack?"

"You go to Newcastle if you want. I'm off."

Defoe pulled a grubby overcoat higher over the great man's chest. "If you won't help us for my sake—if not for the sake of your family, if you have 'em, or your own unborn children—if you won't do it for your own honor, then do it for *him*."

"Isaac? What has he to do with me?"

"Isaac helps us understand, Jack. If not for the laws he has discerned in the sky we would not know the Comet, or where it has come from. We would cower from it, and when the Phoebeans sprout from the ground we would fall at their feet, or we would frantically sacrifice each other to appease those icy gods, as the savage Indians did as Cortez approached. We need Newton, Jack. Without him we really are as Swift saw us, as degraded animals who do not even understand what destroys them. Help me save him."

I sat stubborn, not wanting to face him, or the gnawing doubt that was undermining my determination. Yet I hesitated; I did not leave.

"I'll do you a deal," Defoe said, wheedling once more in that damnable way of his. "Come out with me now, in the night, and help me bring the horses back from Shilbottle. Only that. Then you can do as you like. Will you consider that?"

And so it went! You will not be surprised if you have followed me this far to learn that my indecision almost matches my cowardice, and that by the end of that day I was driving a purloined trap with a precious scholarly cargo through the New Gate in Newcastle's city walls.

## VII

Newcastle is a lumpy sort of a city, built on the hills that surround the mouth of the Tyne. It is one terminus of Hadrian's Wall, Carlisle being the other on the west coast of England. So this was the end of civilization even in those better days, and the Romans had the right idea, if you ask me, in leaving as their most enduring legacy a bridge across the river to take their Great North Road on to more congenial realms in the south. That bridge has gone, but another has been built in its place, itself elderly, a crowded gangway crammed with shops and houses.

The city itself is skirted, just as Newton said, by a curtain of walls, a semi-circle complete with turrets and towers and gates that abuts onto

the north bank of the river. The walls were built by the English to keep out the Scots, and then built up again by one lot of Englishmen to keep out another lot during the Civil War.

If you pass inside the walls you will find a city cut in two by a stream they call the Lort Burn, and dominated by a spectacularly ugly Norman castle on its keep, and a cathedral and a handsome church or two. And that is pretty much it. If you like twisting clutter, backyards full of sheep and goats and cows and pigs, streets full of sailors and traders and the riff-raff who prey on 'em, and all spiced by a pall of smoke and the dust of the coal they ship out of here to all parts of the realm, Newcastle's your town.

We arrived in the evening. As we sought a house to lodge, Defoe commandeered a few boys and paid them a penny piece each to find the mayor, the army captain, the bishop, the guild presidents—anybody who could be of use in putting Newton's program in place.

But the city was in a ferment.

The Phoebean caravan had slowed during that day, coming to rest near Morpeth. By now the Phoebeans had formed a front a mile wide, sprawling to either side of the Roman road as the ice crabs proliferated and grew into fresh monsters. The icy force was only a few miles away, a tide that would surely overwhelm the city when night came, or the next, and the Phoebeans marched again.

And all we had to fight off the monsters was a thin line of troops who manned the walls. The town's garrison had been stripped on orders from London, for there were panicky rumors abroad that with England prostrate beneath the heel of the Phoebeans, the Scots were once more rebelling under their Stuart Pretender in the north, and to the south the French, smarting after the War of the Spanish Succession, were crossing the Channel to have another go.

And so people fled. All through that night, even as Defoe and Newton labored to put a bit of backbone into the city's governors, the townsfolk packed up their goods and streamed south over that crowded old bridge, the richer folk taking to broughams or coaches and the poor going on foot and suffering as the poor usually do. Only a few ships left the port, packed to the gunwales.

As for me, I walked down through the old center of the town until I came upon the river, which as every winter was frozen solid, save where the ice had been broken to allow the ships to escape. I made for the quayside, and through that night I spent the last of my money in the taverns and warehouses that line that fine boulevard.

You may wonder why I didn't run, as I had threatened to do since Shilbottle. The simple answer is that Defoe and Newton had between them gotten under my skin. I was more afraid of the blackness in my soul that would close on me if I ran than of the ice monsters if I did not run. So there you are; my integrity as a coward is intact.

By the time the sun came up I was flat broke and had a head that felt as if it had been stamped on by a Phoebean, and I cared nothing of it. For we had all survived the night; the Phoebeans had not fallen on us, not yet.

In daylight that seemed brighter than for some days—though that

might have been the liquor working in me—a boy came to find me, sent by Defoe. He would escort me to the rather grand house close to the New Gate that Defoe had secured for himself and Newton.

On the way, I noticed a change in the town. The criers were out this morning, ringing their bells and working their leather lungs, announcing that on the orders of King George all able-bodied men and women should report to the gates in the wall's north curtain. Firewood was to be carried, and oil and fat, anything flammable, and spades and picks. Those ships' companies in port were ordered to lend their efforts to the common cause. Hastily printed bills bearing much the same proclamation were pasted to the walls all through the town, and riders went out into the countryside with a similar command.

Well, just as it had been the day before, I saw plenty of people making ready to flee, some of them indeed alarmed by the very call to arms. But as I headed north with the lad, out of the old town center and up Newgate Street, a few sturdier folk gathered, armed with shovels and buckets of pitch and so forth, men and women and a few older children. That determined, grim-faced throng swelled, and a few pastors joined us and led the singing of psalms, so it was quite a band of Christian heroes that approached the New Gate.

The lad brought me to Defoe's house without difficulty; he asked me for a penny, and his reward was a clip around the ear. Defoe was gone from the house, supervising works outside the city.

But here was old Newton, sitting in a huge armchair beside a blazing fire, wrapped so thick in blankets that only his face showed, and his mane of hair, and the withered hands that held his Bible. Bottles of physicals stood on the mantle by him. He looked like a great toad squatting there, but after the ditch at Shilbottle I did not begrudge him this bit of warmth.

I sat beside the fire myself. There was a decanter of brandy and I helped myself to a snort; it helped clear the fumes of my indulgence.

Newton eyed me and my stained clothing. "Out all night, were thee?"

"What's it to you?"

"Would have been better to get your sleep. It's a long day and night we face. And while you drank and whored we worked." There was an occasional table before him; he kicked this.

The table bore a map, a printed-up image of the city and its surrounds, neatly lettered. A coarse slash had been marked in charcoal across the country a mile or so to the north of the walls. "What's this?"

"Our defense against the Phoebeans. An earthwork—one of the greatest since the Romans, I dare say—a trench like the vallum that the Romans strung along behind their Wall."

I snorted. "How long is this, three, four miles? You wouldn't impress the Caesars." I felt embittered, and took another slug of brandy, perhaps unwisely. "And this is your defense of mankind—a scrape in the ground, to stop a species that has traveled between worlds?"

He said angrily, "It's the best we can do, and what's the best *you* can do, Hobbes? Have you ever explored that limit? Anyhow you have served your purpose, or so future ages will believe. You have been the instrument of Providence in bringing Isaac Newton safely to this place."

I resented that. "I'm nobody's instrument. I'm not a bit part player in your drama, sir. Anyhow, who's to say there will be future ages to make a judgment one way or the other? Perhaps the world ends here tonight at the feet of the Phoebeans."

"No. The battle may be won or lost, but humanity will go on."

"How do you know?"

He tapped the Bible. "I have spent my life learning to read God's truth, boy, which is coded in the motion of the planets, in the colors of a rainbow—in the fall of an apple from a tree. And it is likewise coded in the holy books, which are similarly God's creation. I have deduced that without a shadow of a doubt the world has three more centuries to run at least, for the Second Coming of Christ can be no earlier."

I was awed by his words, yet I have always been repelled by holy fools. I stood, grabbing the decanter. "You are an old man. The Phoebeans will kill you before the sun rises again, as they will kill all of us here."

He looked at me closely. "What is it you fear so bad, man? The pain of death, or God's justice thereafter?"

"Neither," I said bitterly, "but oblivion." And I treated Newton to a précis of my own theological journey. "My father's pious beatings taught me to dread God and His punishment—but at least He was there, present in the pain! But then at college I encountered your new breed of Natural Philosophers with their Natural Religion, who speak of God as having created the world and then stepped out of it. Thus they removed Him from the fabric of life altogether. And they quoted you, sir, saying that your equations revealed a bonfire of Immanence."

Newton nodded. "They misquoted me, then. The Natural Religionists use my Mathematick to prop up their dubious French Philosophies." He tapped his Bible. "I do not believe in the primacy of reason over revelation, man, though I do believe we have been given our reason to riddle out God's truth, as He has revealed it in scripture and in nature. But I have grown old seeing this argument unfold. You, though, are of the first generation to grow up being taught that God has abandoned you. No wonder you are afraid—terrified of oblivion! But you need not fear. God is grander than you or I, Jack, but He is not gone."

"You know no more about Him than I do, you old fraud."

"Go to the vallum, boy," he said tiredly. "Add your strength to the shovels and the pitch bearers. Perhaps you will be the instrument of Providence in saving the world."

"I will go to laugh at the fools who toil like ants there, and who will soon die. There is no Providence, Newton. There is no God, or He has abandoned us. Write that in your Philosophy."

And with that I stormed out, the brandy steaming in my head, taking the decanter with me.

## VIII

**T**he vallum might indeed have been dwarfed by the Romans' mightier works, but it was an impressive enough sight as I approached. It was a

great brown gouge that sliced through the fields and copses to either side of the Great North Road, sore disrupting the farmers' tillage, and stretched off to either horizon. All along its length people toiled, supervised by a few soldiers, churchmen, merchants, and other dignitaries.

Already wood was being piled up in the gully, and waiting by the lip were queues of carts bearing barrels of pitch and oil and camphor and fat. Looking further afield I saw that woodsmen were at work in the patches of forest nearby, and more carts brought fresh-cut timber to add to the construction. I began to see the design. This was not a mere ditch, but a vast linear bonfire.

It was about noon as I came upon the vallum and saw this, all of it thrown up in a few hours. And on the northern horizon I could see the mobile city of the Phoebeans, their animate structures both tall and short, motionless now but waiting for the night.

I asked a clerk for Defoe, and soon found him. He had had a sort of command tent set up for him, with the mayor, the captain of the city garrison, and other officials. Within was a large-scale map of the works, and runners came to and fro bearing messages to the workers and the surveyors who guided them. But Defoe himself was not in the tent but down in the vallum, wielding a shovel with the rest. When he saw me he clambered out and sat with me on the lip.

I offered him a swig of Newton's brandy. He was stripped to his shirt, and was sweating with the work. He said, "I will swear the day is a tad warmer than it has been. Perhaps the winter is loosing its grip at last—eh?"

I looked up at a sky that was a shield of grey, and the frost on the broken ground, and felt the chill in my own bones. "You are warm because you are sixty years old and working like a navvy."

"Ah, but I'm alive. Alive, eh! Just like my Crusoe, and determined to stay so. You saw Newton, then?"

"He believes we will survive because it says so in the Book of Daniel."

Defoe grunted. "He sees further than the rest of us, Jack. And if there are forces at work in the world for whose purposes we are mere instruments—well, then, it is up to us to behave as if it were not so. Eh? Come now, be a sport. Grab a shovel and a bucket of pitch, and help build this wall of fire to keep out those Phoebean monsters. What do you say?"

"I say it's a waste of time." I pointed out the obvious flaw, that even if the Phoebeans were repelled by this improvised barrier, there was nothing to stop them flanking us by simply walking around it, and then on into Newcastle, and that would be that.

"Ah, but at least digging it will pass the time until nightfall, when we will see what's what. And what else are you going to do—read a book? Never find another like my Crusoe, you know."

"Your ebullience is unbearable," I said. But I stood and stripped down to my jerkin. "Give me a shovel; I would banish the cold."

So we labored through the rest of the day, the two of us side by side. We made hasty meals of army tack, and I fortified myself with swigs from my brandy decanter. And, if you want to know, I took some care to save my strength. If all failed I wanted to have the wind to do a bit of running. Defoe noted my slacking without comment.

Dark fell too soon, and we worked still as the Phoebeans started to move, revived by the night and its deepening cold. You could hear them, a dreadful grinding as if one of Defoe's northern ice rivers were pouring down on us. The captain sent runners out to illuminate their position with torches, but it was scarce necessary as you could see the Electrick fire crackle around their limbs, eerie flashes in the dark. I made out that Queen, a quarter of a mile tall, with acolytes monstrous in themselves scuttling around the ground at her feet, and dancing on her back. Still we kept digging, though some lost their nerve and fled back to the city; still Defoe and the other commanders held off ordering the lighting of the great bonfire until the Phoebean army should be close enough, lest we waste our fuel.

At last I heard a kind of singing in the air, and something clattered to the frozen ground beside me. I bent and picked it up. It was an egg of ice, spat out by the Queen or one of her attendants. I dropped it and crushed it under my heel.

"That's it, lads," Defoe called. "If they start to seed the ground we're standing on we're in trouble. We can't leave it any longer—light the fires! Light, light!"

The word was echoed by calls all along the length of our vallum. "Light, light!" Workers scrambled to get out of the ditch, and I saw wheeling sparks as torches were hurled into the works. A wall of fire raised itself up before us, and the thousands who had labored here cheered.

As they neared our fire the lead Phoebeans slowed, moving jerkily as Newton's calenture afflicted them, heat congealing their strange Electrick blood. Some of them suffered more directly, their limbs softening before the flame; they were after all creatures of ice. But they would soon have overwhelmed our line if simple melting were their only weakness; it was the calenture that stalled the lead units and blocked their passage before they could reach us.

Now the army's guns spoke, sending balls and shells raining into the crowd of Phoebeans. It was like firing into an ice grotto; delicate limbs smashed with tinkles like broken windows, and those fat lenticular bodies fell to their ruin. But the shells were few, their aim erratic, and the Phoebeans many, and there were always more to take their place.

And even now ice eggs were landing behind the line of the vallum. They were met with boots and spades and thrown into the fire. Here and there, however, ice crabs emerged, their lenticular bodies sliding up their temples of limbs; we knew from experience that before the night was done such seedlings could grow into mighty trees of ice and Electrick, and we smashed and stamped them down. But many eggs sailed over our heads into the dark, and I knew we could not get them all, and that new monsters were already birthing in the dark behind us.

We labored on through the night. I stayed close to Defoe, so I could hear the reports brought by the runners. The line was holding everywhere, the citizens of Newcastle showing a courage I for one would not have anticipated.

And likewise I did not anticipate that the Phoebeans made no attempt

to flank us; instead they simply came onto our fire in waves, one replacing another when it fell, and the great crowd bunching up being the barrier. It was this that finally convinced me that the Phoebeans are animals, not sentient in any degree; we were fighting a plague, or a stampede, not an army.

"Ha!" I said bitterly to Defoe, swigging at my brandy. "Swift should have stayed alive to learn that."

He eyed me with some disgust. "You might chuck that brandy on the fire. It would do more good than in your belly."

I laughed at him and walked away.

After that the night became a simple race between the turning of the world and the exhaustion of our fuel, and the growth of the new beasts behind us. If we could hold out to the dawn we might have a chance, and to that end we worked flat out to bring more fuel to the fires. We even had carts coming up from the city piled high with roof timbers from broken houses, and bits of furniture—anything that would burn.

In the small hours the skies cleared, and the Comet's tail stretched. It was a pretty sight by the vallum, that wall of flame sending sparks high up into a star-strewn sky. But none of us had eyes for beauty, not that night, for the cold helped the Phoebeans.

We came heartbreakingly close to winning it.

I could actually see the first roseate glow in the eastern sky when our lumber ran out, and then the pitch, and we fell exhausted from the hauling of it. And as our fires died at last the Phoebeans closest to the flames began to stir, the strange calenture leaving their limbs, and they probed ever closer to the vallum.

We fell back. People slipped away, returning to their homes to face the end.

It was when a brute of a Phoebean burst out of the ground not ten feet from me, smashing up Defoe's command tent in the process, that I decided enough was enough. "That's it for me, Defoe."

Defoe looked done in, for he had labored all night and labored still, a work for which he was too old. But he yelled, "We're not dead yet!" He ran toward the tent and swung his pickaxe against a Phoebean leg, and the delicate limb smashed into pieces. Of course the beast had many other limbs that slid around to take the weight, but Defoe laid about him like a madman, smashing limbs until the air was filled with tinkling ice fragments. And the great lenticular body began to tip, a roof over Defoe's head.

I scrabbled out of the way. "Get out of there, man!"

But even if he were not exhausted he could not have reached safety. He ran and he fell, and the sharp rim of the Phoebean's carcass came down and fair pinned his right leg. Yet he lived. He lifted his head, his face contorted with pain, and looked me in the eye. "For God's sake, Jack!" He reached out his hand.

I did not run, not yet. I might have freed him, even if I had to chop off his trapped foot with an axe. But another Phoebean burst up not yards away, sending a squad of soldiers wheeling in the air. And another beyond it, and another. We were overrun, and it was not a place for Jack Hobbes to linger.

Defoe saw the intent in my face before I moved a muscle. He roared, "So you are a coward at heart after all."

"Save your breath for God, Dan, for you will meet Him in a minute." I threw the brandy decanter down before him, and turned and ran.

Amid the clamor of the battle, the huge creaking of the Phoebeans as they overwhelmed the vallum, and the roar of the guns that were still manned, I heard Defoe's voice calling, "Damn you, Jack Hobbes! Damn you to hell!"

I ran back down the Great North Road, pushing my way through a fleeing crowd of soldiers and citizens alike. As I have said, I had conserved my strength for the trials to come, and now that stratagem paid off as I outran the exhausted.

Newcastle's walls were manned by soldiers and citizens preparing to mount a last defense of the city with half-pikes and muskets that must have been old in the time of King Charles. Antients taken from the ships on the Tyne fluttered over their heads, and it was a brave sight. But I laughed at them all as I shoved my way through the crowds at the New Gate.

I ran on down Newgate Street. The cathedral was packed to the gills with weeping penitents. I kept running for I knew sanctuary was to be found only to the south, far from the Phoebeans, not within the flimsy walls of any church.

I pushed past the castle and made it to the bridge that led over the river to the south, but this, you may well imagine, was blocked by struggling humanity, a good few of them soldiers flying from the colors, all rendered as static by the sheer numbers as the waters of the frozen Tyne below. And in this mass my own flight came to an end, for no matter how hard I punched and kicked and trampled I could make no progress. I found myself stalled at last under the sign of a pawnbroker's shop, long icicles dangling from the three balls; it was a type of establishment that had won much trade from me in the past, and I laughed again, this time at myself, for I wondered if those hanging icicles would be my last sight on earth.

Then a tremendous groan came from beneath the bridge. There was a surge of the curious and the frightened, and I found myself propelled to the parapet and crushed there, looking down into the river. The ice surface, months old, littered and scarred by bonfires, was heaving and cracking into great concentric circles. I fought viciously to get away from that place, for I knew what was coming, but I was trapped.

The Phoebean's limbs shot into the air, scattering chunks of Tyne ice that rained down over the crowded bridge. We screamed and struggled, helpless. Then up came the lenticular body, and soon a Phoebean no less than a hundred feet tall was grinding its way through the river ice toward land. It rose up out of the water near the abutment of the bridge, and strode easily into the streets of the city, scattering cobbles and people with effortless strength. It mounted the castle mound itself, demolishing the ancient buildings; and it stood in the ruins, monarch of all it surveyed.

And there it stopped.

On the bridge, still we struggled against each other, but I stared at the Phoebean, wondering why it was so motionless, and wondering why its fellows did not rise up after it out of the river. And I felt a splash of water on my neck.

I looked up. I was back under those pawnbroker's spheres once again. A shaft of sunlight, cast by the mighty solar hull rising above the eastern horizon, played on the dangling icicles—and for the first time in months the sun delivered enough heat to melt a grain of ice.

The people around me grasped the essence of it, and a great roar went up along the bridge. Suddenly the Phoebeans could not escape their deadly calenture, and their Electrick blood congealed. Everywhere they perforce stood still.

I saw citizens scrambling up the castle mound. They used half-pikes and staves and lumps of masonry from the castle to smash at that Phoebean's limbs until it fell to the ground.

## IX

Ten years have gone by since that momentous morning—ten years before I could bear to put pen to paper to set down my recollections of the tumultuous times in which, all unwitting and very unwilling, I found myself at the very center.

It was not over when the sun rose that morning, of course, and the first breath of the belated spring halted the Phoebeans and saved us. Night fell soon enough, and the battle resumed. But as the world warmed day by day we knew we had gained an invaluable reinforcement in Nature herself.

In temperate latitudes all over the world, the Phoebeans were driven off or destroyed. Now they lurk in the wastes of the Frozen Ocean, and are beaten back when they try to venture south. In Britain it is said that some Phoebeans haunt the Scottish Highlands, and the King has had Hadrian's Wall built up as a firewall against any future advance—though he has named it the Geordie Wall.

Newton lived on only a few years after the Ice War, but other Philosophers have followed in his eminent footsteps, and we have learned much of the Phoebeans since his day, though I opine that for every hard fact learned from a dissection of a Phoebean carcass there are a hundred interpretations. Still, I think we know that the Phoebeans are indeed creatures born in the cold outer halls of our system of planets; perhaps the moons of Jupiter and Saturn are balls made entirely of ice among which Phoebeans swarm and play like nymphs in a spring. They may have spread inward as far as Mars, which is a small, chill world and so ripe for a Phoebean colony. But to them our Earth is a torrid zone, and the calenture that afflicts them is like the tropical diseases that assail Europeans who sail too close to the equator.

The future may be more secure. Those who study the weather assure

us that the world was once warmer than it is now—once the Romans grew grapes in Newcastle, which gives you some indication. Perhaps the cold age that afflicts us now will pass; perhaps there will come a day when we will no longer be able to build bonfires on the Thames and the Tyne every winter, and our fortress of heat will become stronger yet.

The Phoebeans have a foothold on our Earth, but no more. But they wait for us out there in the cold and the dark, as beasts of Norse myth lurk in the chill beyond the glow of the hall's fire.

There are some, in fact, who dream of just such encounters. The study of the Electrick blood of the captured Phoebeans is making a revolution of our Philosophies. Just as Newton theorized, there are paths in those icy carcasses where currents of Electrick effluvium may run forever without friction, generating powerful Magnetick attractions in the process. It is this that gives the Phoebeans their extraordinary strength. A new generation of scholars is bending Newton's Calculus to explain it all, and they dream of harnessing such energies to drive Engines far more powerful than a water-wheel—they dream of building Comets of their own that might sail out among the planets, so we can go and see for ourselves.

And they will be comets with Jesuits aboard! Some pious codheads argue that Phoebeans must have souls, and dream of saving them with God's word, as Saint Augustine saved the Saxons. Missionaries to the moons of Jupiter! But fools they are, for I saw for myself how the Phoebeans dashed themselves over and over on our fires in the vallum that night, all instinct and no wit, like stampeding cattle.

All this for the future, which I am glad I will not see, for I will be dead like the others. Dead, yes, like Newton, and Defoe whom I betrayed with his best book probably behind him, and poor Swift with his best book not yet written, for I am assured by those wiser than me that the satirical traveler's tale Defoe so feared would have been a masterpiece.

It was my fortune, though, that Defoe and Swift took the secret of my final cowardice to the grave, with Newton too addled to speak of it, so that for my part in the adventure, especially the saving of Newton, I was rewarded by the King himself, with a knighthood and, more importantly, with a handsome payment. Sir Jack Hobbes! What an injustice. At least I did not disappoint the shade of Defoe in what followed, for within a year I had lost the lot in a speculative South Sea stock venture, and I was upon the Parish once more. No matter! I do not expect to die rich.

I did not deserve such rewards, of course. Newton called me an instrument of Providence, just as some claim the thaw that defeated the Phoebeans was a miracle. But the truth of the matter was that humanity was threatened by one insensate force in the Phoebeans, and saved by another in the turning of the seasons. All our struggling made not a bit of difference to any of it, and where's the Providence in that? In a universe like a purposeless machine there is nothing before us, nothing after us, nothing for us to do but make the most of our moments in the light. I need have no shame in my clinging to life.

And yet I am haunted by my last vision of Defoe under the Phoebean carcass, and how he hurled his curses at me even with his dying breath. ○

## Where No Dog Has Gone Before

**T**he excitement stirred up by the fiftieth anniversary of Sputnik last year occasioned quite a few new books on the dawn of the Space Age. But perhaps none was more unique and touching, detailed, rich and evocative than Nick Abadzis's *Laika* (First Second, trade paperback, \$17.95, 205 pages, ISBN 978-1-59643-101-0).

This accomplished graphic novel is the definitively researched story—with some artistic interpolations—of the poor little critter inside Sputnik II, a test animal sacrificed to politics, science, and “man’s ambitions.” In assessing the accomplishments of Abadzis, we’ll naturally have to kowtow to the medium itself and talk separately about both story and artwork, always acknowledging that they work hand in hand.

The narrative is divided into a mere four chapters, with the last one being a full eighty pages. In the first division, we meet Korolev, ex-prisoner of the gulag and now Chief Designer of the Sputnik program. He and his crew celebrate the milestone launch of Sputnik I, and shortly thereafter receive orders from Khrushchev himself mandating another launch as soon as possible—a launch with some kind of special upgrade to command the world’s attention. The scientists hit upon the notion of lofting an animal into orbit. But unfortunately the trip will be one-way.

Chapter 2 flashes back to the

birth of Laika—originally named Kudryavka for her curly tail—and follows her rough-and-tumble life before she is purchased by the government labs.

In Chapter 3 we’re introduced to Laika’s human handlers, most notably Yelena Dubrovsky, and to the training regimen the dogs undergo. Chapter 4 finally hooks up again with the realtime narrative. Laika is chosen as the first living organism to attain orbit, transported to the launch facility, and rockets to her sad fate.

Throughout this tale we spend equal time among the human sphere as we do with Laika’s POV. Emotional and intellectual themes, both small and subtle and large and bold, are explored. The domestic life of Laika’s original family; Korolev’s desire to triumph over past adversity; Yelena’s love for the animals in her charge; her co-worker Dr. Gazenko’s unrequited love for Yelena—all these quintessential human concerns are conveyed with insight and drama by the artist/author. For instance, when Laika was a wild dog of the streets, she was fed by a merchant. Taken away, she leaves a hole in the merchant’s heart, depicted eloquently in a single wordless panel that has the man gazing down bereft at the place in the street where Laika used to rest.

In telling any naturalistic story involving an animal “protagonist,” the two main things to avoid are anthropomorphism and sentimentality. Abadzis is scrupulous in steering

clear of these twin shoals. True, we get to hear Laika "talk" and "think" and "dream," but we are never sure if these are not just the interpretations of her actions put upon her by humans. As for undue bathos, Abadzis earns any heart-tugs with his clear-eyed portrayals of both human and canine behavior.

As for his art, I find it to be alluring without being show-offy, almost a "clear line" style. His page compositions are inventive yet easy to follow. I believe I encountered only two full-page spreads in the whole book. One is of Laika flying, and it's a brilliant tribute to Russian painter Marc Chagall. The other is of Laika's enormous rocket on the launch pad, and it looks like a Soviet Realist poster. Very clever, both times.

Non-ideological, objective yet empathetic, this book shows how fiction holds all the trump cards over mere journalism when it comes to penetrating to the essence of historical moments and the human heart. It deserves to stand next to Clifford Simak's classic story "Desertion," which features its own noble canine.

### I Like Ike

We often hear a writer touted as working in a Heinleinian mode. And again, the name of Clarke is frequently trotted out for purposes of literary comparison and influence attribution. But much less often do we encounter plaudits invoking the name of Isaac Asimov. I'm not quite certain why this is, given Asimov's stature as one of the seminal SF writers of the Golden Age and onward, one of the Big Three as compiled above. Perhaps it's because Asimov's style of SF was the least dramatic, most ratiocinative, least

garish of the three. The emphasis today and forever has always been on zippy style and big concepts: flash, in other words. And Asimov was the opposite of flashy.

Still, he mined a certain definable and admirable vein of intellectually thrilling, somewhat demure storytelling, a branch of SF with its own tactics and accomplishments. And it's a vein that's on display even yet, notably in James P. Hogan's *Echoes of an Alien Sky* (Baen, hardcover, \$24.00, 317 pages, ISBN 978-1-4165-2108-2). This is as close to a new novel by the Asimov of *Pebble in the Sky* (1950) as anyone is going to get.

Hogan starts with a classic premise that writers such as Clarke and van Vogt and scores of others have employed before. Visitors arrive at an Earth that is devoid of human life, filled with the ruins of our civilization. This time, there's a bizarre twist. The explorers are from a habitable Venus—not a terraformed world, but one seemingly in its naturally evolved state: the apparent birthplace of their species. They are outwardly human, yet regard themselves as having no connection with the extinct humans of Earth. Moreover, they possess fundamentally different concepts of physics and biology and geology than the ones familiar to us—concepts that work!

Our protagonist is one Kyal Reen, an expert in "electrogravitics." His stolid, dogged investigations, both on Earth and Luna, will eventually unravel enigmas both cosmic and mortal.

From the naming conventions of the Venusians through the social satire (the Venusians find our civilization totally "psychotic") to the emphasis on scientific reasoning, Hogan hews to an absolutely Asimovian path. He builds up a good

portrait at a distant remove of the Venusian society, creates believable social interactions among the Venusians on Earth, and charts out the steps of the solution of his mystery in a tidy manner. The low-key romance between Kyal and biologist Lorili Hilivar is chaste yet affecting (although Hogan has them separated plotwise too much for my taste). The only villain of the piece, Jenyn Thorgan, is hardly a megalomaniac, but rather someone with deluded beliefs. And the one moment of physical violence he triggers is over with quickly, leaving the characters free to return to their rational ways.

Hogan adds a few flashback chapters to the human-dominated Earth that I found superfluous. He tries for some John Campbell-style contrarian wisdom that's a tad clunky: "Trapped in deductive logic. . . . It can't tell you what's true, only what has to follow from your assumptions." But then again, Campbell and Asimov were inseparable for a long time, so it's all of a piece.

A book like this one will never garner wild praise or awards, but it lies at the core of our genre like neutrons adding weight to an atom.

### Yesterday's Tomorrows—Not So Much

David Pringle, founder and ex-editor of *Interzone*, has an interesting theory about the ongoing series of anthologies edited by Martin H. Greenberg and company, and published by DAW. Messr. Pringle calls them "the new pulps." After all, they appear monthly or even more often; draw from a certain constrained stable of writers (many of them DAW authors), with some interlopers to flesh out the TOCs; and tend to fa-

vor commercialism over high art. (Exceptions abound, such as any title edited by Pete Crowther.)

I tend to buy into this theory. Just like the pulps, these volumes generally offer robust, professional storytelling of an entertaining variety that never descends to lousiness or aspires to greatness. Their thematic centeredness offers easy-to-grasp hooks and lures for the audience. And they are mass-market originals, inexpensive like pulps.

These factors are all on display in *The Future We Wish We Had* (DAW, mass-market, \$7.99, 306 pages, ISBN 978-0-7564-0441-3), edited by Greenberg and Rebecca Lickiss. But while the stories herein are pretty solid, for the most part they fail to address the core conceit, throwing away the chance for a really wonderful book that would have dug into the foundations of SF and futurism in general.

The hook here is the notion of examining "yesterday's tomorrows," all those glittering futures that SF presented at a certain crest of its consensus solidarity. Personal jetpacks, rolling roads, a colonized solar system, robots, etc. These classic yet never-now-to-be scenarios, whose nostalgic and somewhat spooky allure was best crystallized in William Gibson's "The Gernsback Continuum," could have provided a brilliant launch pad for writers to dig deep into the roots of SF's vision and assumptions. But hardly any of the writers do so. There's practically zero pastiche or attempt to recapture or revise the tonality or style of this era of SF. Most of the writers toss in a token or two from that era and tell a tale that could have happened anytime. Let's look at what we have.

Esther Friesner in "A Rosé for Emily" deals with a balky automatic kitchen. "Waiting for Juliette" by

Sarah A. Hoyt concerns cryogenic sleep. Dave Freer's "Boys" examines a sentient house stymied by a mathematically inspired trick. Brenda Cooper portrays undersea settlements with "Trainer of Whales." The cartoon series *The Jetsons* gets a new revisionist episode in Kevin J. Anderson's "Good Old Days."

Alan L. Lickiss evokes android members of a wedding party in "Kicking and Screaming Her Way to the Altar." "Alien Voices" by P.R. Frost tells of an injured dancer cured by nanotech. Loren L. Coleman's "Inside Job" is about a cop whose beat is virtual reality. James Patrick Kelly and Mike Resnick produce "A Small Skirmish in the Culture War" about the cynical future of television shows. Lisanne Norman's "Dark Wings" is the only story to venture out of our solar system, dealing with mysterious aborigines. "My Father, The Popsicle" by Annie Reed is another look at cryonic hibernation.

Julie Hyzy's "Destiny" finds an elderly woman building a cross-dimensional "shuttle" in her home. "Cold Comfort" by Dean Wesley Smith tells of a secret organization that will conquer space with borrowed tech. Irene Radford brings up the old notion of smellovision in "The Stink of Reality." More undersea colonization occurs in "Yellow Submarine" by Rebecca Moesta. And Kristine Kathryn Rush closes out the volume with "Good Genes," about the ethics of genetic profiling.

As I mentioned above, none of the authors tries to sound like Heinlein or van Vogt or Simak. And out of all these stories, only the Anderson and Smith really capture any sense of interplay with the key ideological and cultural paradigms of Golden Age SF. As for stories featuring nanotech and virtual reality and genetic testing—

well, however satisfying they might be on their own merits, they don't really belong in a volume whose ostensible purpose is to deal with futures conceived before such technology was even imagined or widely disseminated in the literature.

In the quest to keep the Greenberg anthology pipeline filled, I fear that the assembly of these volumes often slights or ignores the potential wonders inherent in their own ingenious premises.

### Not Fade Away

SF has had a long history of positing empires underground, whether in actual "hollow earth" scenarios (Edgar Rice Burroughs and *Pellucidar* [1923]) or just hidden away in deep caverns (John Uri Lloyd and *Etidorhpa* [1895]). In fact, the life of whole races and species and isolated dwellers below the surface might very well constitute one of Rudy Rucker's definitive "power chords." (And note that Rucker himself dealt with the theme in his *The Hollow Earth* [1990].) The trope is rich with atmospheric strangeness, from Tolkien's Mines of Moria to Jeff VanderMeer's crypts below Ambergris.

In *The Fade* (Gollancz, trade paper, £10.99, 312 pages, ISBN 978-0-575-07699-0), Chris Wooding amps up the weirdness angle considerably by his choice of exotic venue, tacks on some Richard Morgan tough-guy action, adds in a bit of Judith Merrill maternal pathos, and comes up with a winning volume.

In a solar system of two harsh suns, Orale and Mochla, there is a planet named Beyl. Beyl has a moon named Callespa. It is this satellite that hosts the human (?) and other characters of our story. A handful of

humans, the SunChildren, have managed to stay alive on the surface by various tactics and adaptations. But the majority of the Callespans have long ago migrated underground, into the deep caverns of their moon. Under bioluminescent light, amidst strange fungal growths, by the shores of nighted oceans, and across tumbled plains, they live their cloistered yet full lives, mainly in affiliation with one or another of two perpetually warring empires: Eskara or Gurta.

Our protagonist is Orna, a trained warrior and assassin from Eskara. Taken from her general role as enforcer for some of the shadier elements of her native city, she has been plunged into the front lines of the latest battles. Captured by the Gurta, she is imprisoned in the horrible fortress known as Farakza, separated from her husband and son. The first half of the book will chronicle her life as a prisoner of war and her ingenious escape plan. The second half finds her back home and forced to take a hand in the machinations of the elites.

Right away I think you'll see that we're in a kind of Leigh-Brackett, planetary romance mode. In fact, the technology of this world is so primitive that parts of the story almost read like a Conan escapade. And Orna's hard-bitten skills and attitude jibe with the Cimmerian's. As for the fungi-based lifeforms, I'm reminded of Piers Anthony's overlooked novel *Omnivore* (1968).

Told in the first person, Orna's story has a striking immediacy and believability. Wooding exhibits a well-developed, almost tactile ability to deliver descriptions of physical events, such as crossing a river of lava (think primo Keith Laumer), a skill that plunges the reader into the

sometimes Clark-Ashton-Smithian milieu. Combined with his portrayal of Orna's emotional life, this adds up to a satisfying whole. When you toss in a trace of allegory (the Gurta resemble more than a little our Moslems, whereas the Eskara are heartless capitalists such as we know in the West), the action-oriented plot develops further interest.

The title refers to a slang term among these people: a "fade" is both a kind of deadly ghost, and also a bit player, someone to be duped and disposed of cavalierly. Orna becomes both at times, and yet manages to transcend the destinies others try to place on her. Even amidst the fantastical setting, that's a realistic hero and storyline to me.

## Big Fish

The project known as *The Complete Stories of Theodore Sturgeon* was originally projected to fill ten volumes. Yet here comes Volume XI, *The Nail and the Oracle* (North Atlantic Books, hardcover, \$35.00, 256 pages, ISBN 978-1-55643-661-1), and we are only up to 1971 in Sturgeon's career. (Death overtook him in 1985.) But of course, Sturgeon's output famously tailed off in his later life, and it's probable that editor Paul Williams (who provides his usual fine endnotes again) will need only one or two more books to round out this splendid monument to one of the best writers of the twentieth century. And who are we to complain about such unexpected largesse anyhow?

This offering does not contain as high a percentage of masterpieces as some of the earlier books. But that's like saying that an exhibition of "average" Picassos is less than stellar. There's still much to admire and en-

joy here, starting with the long and intimate introduction by Harlan Ellison. (These intros have been an excellent feature of the series, and Ellison's might very well be the best.) We get a baseball story, mysteries, a mimetic piece, and a western among the SF, illustrating Sturgeon's range and ambition. (And of course also serving as a testament to the freelancer's desperate attempt to serve whatever market will pay him.)

From the SF entries we find Sturgeon's famous contribution to the first *Dangerous Visions* anthology (1967)—"If All Men Were Brothers, Would You Let One Marry Your Sister?"—as well as two utopian, world-changing pieces: "Brownshoes" and "It Was Nothing—Really!" These all hold up well, although the latter two, in their focus on social issues more than eternal verities of the human heart, do seem a bit dated.

Every volume of this series allows me to see something new about Sturgeon. Here are my latest semi-random conclusions.

Although he could do immediate action brilliantly, he could also be talky and non-dramatic as hell. This comes up in "... All Men ..." which is told mainly in a flashback monologue full of theorizing and explaining! Hardly a good example of the famous writerly dictum of "show, don't tell." But Sturgeon, a master, could violate rules he understood so well and still produce compelling tales.

I note also that a story like "When You Care, When You Love," where a

rich woman loves and needs a man so much that she concocts an enormous social engine to recreate him after death, has a creepy, controlling, paranoid underbelly. I want to assume Sturgeon was conscious enough about his art to have done this intentionally. But multiple readings of this story leave me in some doubt. Did Sturgeon realize that one could love too much, or was love for him the paramount measure of goodness, even when bordering on greed and fanaticism?

Several stories highlight for me an important technique and theme of Sturgeon's: the observation and depiction of certain events that are later reversed or understood differently. It's a methodology that embodies powerful conclusions about the deceptive nature of reality.

Finally, I note in "Take Care of Joey" that Sturgeon must've been a fan of Damon Runyon's writing: first-person narrative as delivered by a palooka.

Some of Sturgeon's analysis and reportage of sexual mores and hang-ups have not aged well. "Assault and Little Sister," for instance, relies on mid-century "Old Maid" stereotypes. But you're guaranteed to emerge from this compilation with the sense that were he alive and writing today, he'd be thoroughly *au courant* and keenly insightful regarding whatever new hypocrisies and neuroses have come to dominate our society, and full of needful stories asking the next question about human nature. ○

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Last call for the Denver World Science Fiction Convention; But there are other cons, if you can't make it there. Plan now for social weekends with your favorite SF authors, editors, artists, and fellow fans. For an explanation of con(vention)s, a sample of SF folksongs, and info on fanzines and clubs, send me an SASE (self-addressed, stamped #10 [business] envelope) at 10 Hill #22-L, Newark NJ 07102. The hot line is (973) 242-5999. If a machine answers (with a list of the week's cons), leave a message and I'll call back on my nickel. When writing cons, send an SASE. For free listings, tell me of your con 5 months out. Look for me at cons behind the Filthy Pierre badge, playing a musical keyboard.—Erwin S. Strauss

## AUGUST 2008

- 1-3—ConnectiCon. For info, write: 705 N. Mt. Rd. #B-11, Newington CT 06111. Or phone: (973) 242-5999 (10 AM to 10 PM, not collect). (Web) [connecticon.org](http://connecticon.org). (E-mail) [info@connecticon.org](mailto:info@connecticon.org). Con will be held in: Hartford CT (if city omitted, same as in address) at the Convention Center. Guests will include: none announced. Gaming, anime, webcomics.
- 1-3—DiversiCon. (612) 721-5959. [diversicon.org](http://diversicon.org). Minneapolis MN. Anne Frasier, Nnedi Okorafor-Mbachu.
- 1-3—JumpCon. [jumpcon.com](http://jumpcon.com). Somerset NJ. Almos, M. McConnell, Boxleitner, Beltran, Furlan, J. Carter.
- 1-3—Costume College. [costumecollege.org](http://costumecollege.org). Airtel, Van Nuys CA. For fans of costume, in all its forms.
- 1-3—Fandemonium. (208) 284-3858. [borneo@fandemonium.com](mailto:borneo@fandemonium.com). Civic Center, Nampa ID.
- 6-10—Dervention 3. [dervention3.org](http://dervention3.org). Denver CO. Bujold, Stembach, Whitmore. 2008 WorldCon. \$200+ at the door.
- 6-10—Creation. (818) 409-0960. [creationent.com](http://creationent.com). Hilton, Las Vegas NV. Commercial event with many stars.
- 7-11—Terminus. [terminus2008.org](http://terminus2008.org). Chicago IL. Harry Potter convention. Quidditch tournament.
- 8—SanJapan. [san-japan.org](http://san-japan.org). San Antonio TX. Japanese anime and culture convention.
- 8-10—OtaKon. [otakon.org](http://otakon.org). Baltimore MD. Big anime meet.
- 14-17—GenCon, 120 Lakeside Ave. #100, Seattle WA 98122. [gencon.com](http://gencon.com). Indianapolis IN. Big gaming convention.
- 14-17—Mars Society Con, Box 1312, Big Piney WY 83113. [marssociety.com](http://marssociety.com). U. of CO, Boulder CO. Space development.
- 15-17—ArmadilloCon, Box 27277, Austin TX 78755. [armadillocon.org](http://armadillocon.org). Austin TX. Scalzi, D. Morrissey. SF & fantasy.
- 15-17—ConVersion, Box 30314, Calgary AB T2H 2W1. [con-version.org](http://con-version.org). Jack McDevitt, Dr. Rebecca Bradley.
- 15-17—Horrorfind, 9722 Groffs Mill Dr. #109, Owings Mills MD 21117. [horrorfindweekend.com](http://horrorfindweekend.com). Adelphi MD.
- 15-17—VividCon, 1624 E. Virginia, Stillwater OK 74075. [llamalucy@gmail.com](mailto:llamalucy@gmail.com). Chicago IL. Fan videos.
- 15-18—MythCon, 434 W. 120 #5E, New York NY 10027. [mythsoc.org](http://mythsoc.org). New Britain CT. High fantasy (Tolkien, etc.).
- 21-24—GateCon, Box 76108, Colorado Springs CO 80970. (710) 574-6427. [gatecon.com](http://gatecon.com). Vancouver BC. StarGate.
- 22-24—BuboniCon, Box 37257, Albuquerque NM 87176. [bubonicon.com](http://bubonicon.com). Weber, Abraham, Eggleton, Stirling.
- 22-24—PiCon, Box 400, Sunderland MA 01375. [pi-con.org](http://pi-con.org). W. Springfield MA. Doctorow, Mach, Jen Williams, XKCD.
- 22-24—JumpCon. [jumpcon.com](http://jumpcon.com). Detroit MI. Almos, M. McConnell, Boxleitner, Beltran, Furlan, J. Carter.
- 22-24—Fan Expo, 38 Riverlee Dr., Toronto ON M9P 2H4. (416) 241-7827. [hobbystar.com](http://hobbystar.com). Metro Convention Center.
- 22-25—DiscWorldCon, Box 4101, Shepton Mallet BA4 9AJ, UK. [dwcon.org](http://dwcon.org). Metropole, Birmingham UK. T. Pratchett.
- 23-24—Japan National Con. [daicon7.jp/](http://daicon7.jp/). Namikiri Municipal Hall, Kishiwada City, Osaka Japan.
- 29-31—CopperCon, Box 62613, Phoenix AZ 85082. 480949-0415. [coppercon.org](http://coppercon.org). M. Davidson, G. Weisman, A. Alongi.
- 29-31—Mephit FurMeet, Box 190512, St. Louis MO 63119. [mephitfurmeet.org](http://mephitfurmeet.org). Holiday Inn Arpt., Memphis TN. Furies.
- 29-31—KumoriCon, 960 Anderson Lane #1, Springfield OR 97477. [kumoriicon.org](http://kumoriicon.org). Hilton, Vancouver WA. Anime.
- 29-31—MeCon, 115 Malone Rd., Belfast BT9 6SP, UK. [meconbelfast@yahoo.co.uk](mailto:meconbelfast@yahoo.co.uk). Elms Centre, QUB. P. Cornelli.
- 29-Sep. 1—DragonCon, Box 16459, Atlanta GA 30321. (770) 909-0115. [dragoncon.org](http://dragoncon.org). McCaffrey, Koenig. Huge.

## AUGUST 2009

- 6-10—Anticipation, CP 105, Montreal QC H4A 3P4. [anticipationst.ca](http://anticipationst.ca). Gaiman, Hartwell, Doherty. WorldCon. US\$150+.

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The satisfying *thump* you'll hear next month is the arrival of our outstanding October/November double issue in your home's mailbox. We've done our best to cram the 240 pages of it to the breaking point, starting with not one, but two striking novellas by two of your favorite *Asimov's* authors. Our first, by Nebula and Hugo award-winning dynamo **Nancy Kress**, concerns the bizarre goings-on in a managed care home where the elderly residents are unsure whether the startling effects of "The Erdmann Nexus" are age specific, scientific, or metaphysic! Next, Hugo winner **Robert Reed** returns with a claustrophobic, troubling meditation on justice and the lengths frightened government interrogators are willing to go to find the "Truth" according to an imprisoned terrorist from the future. We're sure this will be considered one of 2008's most talked-about and controversial stories.

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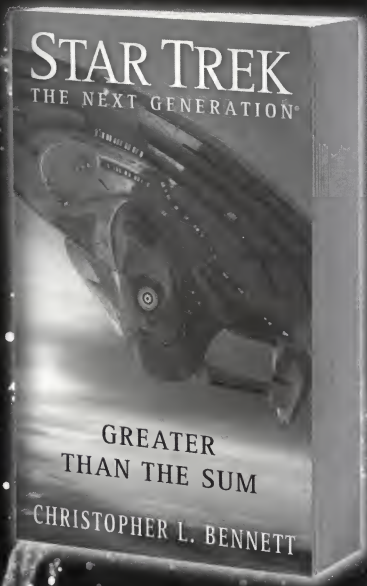
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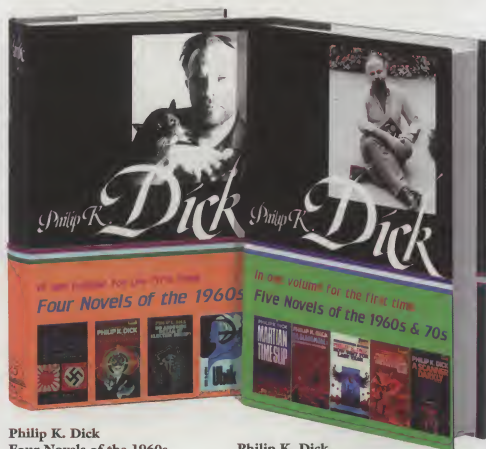
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